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'Night duty' : A study of nurses' attitudes toward night duty, with implications for hospital and nursing management

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'NIGHT DUTY:'

**A study of nurses' attitudes toward night duty,
with implications for hospital and nursing
management.**

by

Beth Louise Brown.

**A research report submitted in partial fulfilment
of the requirements for the Degree of Bachelor of
Health Science Nursing, with Honours, at the
Western Australian College of Advanced Education,
Churchlands, Perth.**

November 1989.

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ABSTRACT.

Research specifically related to the needs and attitudes of nurses to night duty is in its infancy. Nurses have previously been included in studies related to circadian rhythms, and job satisfaction but only recently have complex aspects of the adaptation to working at night in health care institutions been given consideration. Shift work in general, has been identified as a stressful, occupational health hazard. Nurses cannot be compared to other shift workers.

Chronobiological research now confirms that many individuals are unable to adapt to night work. This is in contrast to the historical management view which held the opinion that nurses should be able to work any shift if required, in an organisation which offers a twenty four hour service to the public.

A search of relevant literature indicated that nurses are becoming increasingly concerned about work practices and conditions at night as well as the quality of the nursing services provided. Alternative roster and staffing patterns are being researched to ensure staff levels are maintained, absenteeism is reduced and job satisfaction exists.

Nurses from six Western Australian hospitals were invited to participate in this study which sought to identify nurses' attitudes toward night duty and to research the causes of these attitudes. Two hundred and fifty four nurses (61%) returned the questionnaire. The majority, regardless of role, indicated negative attitudes toward night duty predominantly generated by chronobiological factors and maladjusted circadian rhythms which caused chronic fatigue. Nineteen per cent (19%) of the respondents indicated that they would rather leave or change their role than work at night.

The results of this study reinforce conclusions reached in a recent (1987) study on night shift work and night nursing services in the United Kingdom. Situations and concerns related to night nurses identified internationally in Nursing Journals have been confirmed to exist in Western Australia.

In the light of these findings, recommendations are made for the selection, orientation, and education of staff required to work at night. The medico-legal ramifications of current management practices are identified and an urgent need for further research with a view to identifying the quality of nursing services offered at night and occupational health and safety issues is recommended.

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CHAPTER 1.

INTRODUCTION AND PURPOSE OF STUDY.

Shift work is an unavoidable reality in providing twenty-four hour care for the sick. This implies that nurses, unless exempted by specific contract, work night duty either permanently or when rostered to do so. Nursing shift work has been described as a unique occupational hazard; (Williamson et al, 1988, p. 162) and shift work and rostering as major health stressors for nurses (Linder-Peltz, 1986, p. 42; Benner & Wrubel, 1989, p. 388 and Sinclair, 1988, p. 215). A better understanding of the problems experienced by nurses and their attitudes toward working night duty could assist in the identification of nurses most suited to work at night, and in the development of roster patterns and work conditions which contribute to the wellbeing of staff and patients

While working as Nurse Manager - Night Duty, the author observed that there were apparent attitudinal differences between groups of nurses who were rostered to work night shift and those nurses who chose to work night on a permanent basis. The latter group organised their lives around their work commitment, obtained more sleep and appeared to suffer less circadian rhythm disturbance than those rostered to night duty intermittently.

The recently implemented Nurses Career Structure has created new pressures for nurses. The need to obtain tertiary qualifications has led to some nurses requesting to work on specific nights to enable attendance at lectures during the day. A consequence of this is that nursing colleagues are expected to work nights, which may be inconvenient for them. In relation to patient care, Flynn (1983, p. 31) suggested that the combination of night duty and study can lead to a decline in the quality of patient care, and an increased ~~increased~~ work load for fellow staff who are supporting tired and stressed colleagues.

The perception that some nurses were consistently claiming illness when rostered for night duty led to discussions with the individuals concerned. These staff members described the physical symptoms that they experienced and confirmed that their inability to adapt to night work was the cause of their absenteeism, a situation made more difficult by apparent inflexible roster patterns and unsympathetic management staff. These nurses feared that they could cause accidents because of their constant fatigue and reduced mental alertness, symptoms which are confirmed to be common among night shift workers (Sinclair (1988, p. 215). These nurses also confirmed that they were having difficulty coping with the role of nurse, wife, mother and student. Economic and family reasons prevented their studying full time.

Adaptation to new roles and an influx of new management staff has created new pressures for both staff preparing rosters and those working them. Historical roster patterns are perpetuated as information specifically relevant to the needs of night and shift working nurses has been absent from nursing management texts. The focus has been on providing twenty - four hour nursing staff cover for the hospital organisation (Rowland & Rowland 1985, p. 166; Stevens 1985, p. 105).

The purpose of this study is to identify nurses' attitudes toward night duty and to research the causes of these attitudes. Are attitudes toward night duty primarily influenced by the hospital employment and rostering policies, work environment, conditions and work practices or by demographic, circadian and chronobiological factors that may affect an individual's ability to cope with night work?

The need to identify nurses most suited to work at night has been recommended by a number of researchers (Kemp, 1984, p. 217; Milne & Watkins, 1987, p. 144; Linder-Peltz, 1986, p. 42; Fiedor & Keys, 1987, p. 1167; Alward, 1988, p. 1337; Brown et al, 1988). The recent formation of a West Australian Steering Committee to discuss and research alternative roster systems to improve productivity and employee satisfaction (Della, 1989, p. 26) has confirmed the need for input from nurses with regard to roster

patterns, work conditions and attitudes to night duty. The confirmation of the psychosocial and other health hazards of hospital and shift work highlighted by Sinclair (1988), Jacobsen & McGrath (1983), and Benner & Wrubel (1989) has demonstrated the need to identify the needs of night nurses and the development of appropriate orientation and stress management programmes. Potential dangers for staff and patients need to be identified, and quality assurance programmes developed to ensure the standard of care available at night is equal to that during the day.

CHAPTER 2.

REVIEW OF LITERATURE.

Nurses appear to be increasingly concerned about work practices and conditions for those who work night shift. Their concern is directed at the quality of care provided and the effects that night duty has on personal, family and social relationships, study patterns and family life. The chronobiological factors affecting night nurses are reviewed and related to the concerns of nurses toward participating in night duty and night shift work. Factors affecting nurses attitudes toward night duty are discussed and some solutions are provided to reduce stress and increase the effectiveness and quality of nursing care.

A comprehensive computer literature search was undertaken to identify information relevant to night nurses and nursing management in an attempt to ascertain nurses' attitudes toward night duty. No research specifically related to attitude was identified. However, over the past decade numerous subjective and anecdotal articles have been published in American, British and Australian Nursing Journals.

These articles have highlighted nurses' concerns about their inability to cope with rigid inflexible rostering (Cohn, 1981), the lack of awareness of management staff to the needs of shift

workers (Rose, 1984), the effects of maladjusted circadian rhythms (Minors et al, 1985), the experience and exploitation of student nurses (Pryde, 1987; Reverby, 1987), and the health hazards of shift work (Bosch & Lange, 1987).

Night duty for nurses has been described as 'the last frontier' (Melbin, 1981, p. 255), 'punching the body clock' (Brown, p., 1988, p. 26), 'an aspect of occupational stress' (Davis, 1984, p. 47) and 'your worst dream come true' (Fiedor & Keys, 1987, p. 1167). It appears that very little progress in understanding the needs of nurses on night duty has been made in the last fifty years (Fiedor & Keys, 1987, p. 1167). To understand the impact of night duty and the care provided to patients, present management practices will now be reviewed.

Management practices and perspectives

In the 1970's nurses became aware of deficiencies and concerns relating to night shift work. Di Vinceti (1972, p. 106) described the main problems of administering nursing services as being:

- * the need for twenty hour services
- * the unpredictability of patient numbers
- * totally unrealistic budgetary limitations
- * staff absenteeism especially at night.

The Royal College of Nursing Reports (1958 & 1978) and the National Health Services Management Consultancy Services Report (1987) demonstrated similar problems.

The British N.H.S. report (1987), produced by a research team which did not include a nurse, has confirmed many of the concerns regarding night work conditions raised by nurses (Carr, 1976; Eaves, 1980; Salvage, 1980; Watson, 1982; Flynn, 1983; Davis, 1984; Kemp, 1984 & 1985). It appears that British night nurses were observed to be treated as second class citizens as their personal, welfare, educational and social needs were not met. Staffing levels were financially restricted, were historically based and not related to work load. Nurses were required to take increased responsibility without appropriate resources or back up support. Some hospitals had no management input at night (Dopson, 1988; Sadler, 1988; Scott, 1988). Twilight shifts were recommended to cover busy times and to permit nurses to have meal breaks. However, rotational shift rosters recommended to improve day/night staff communication barriers is questionable in the light of research indicating that these roster patterns are a health hazard, especially to nurses (Janowski, 1988, p. 1341; Benner & Wrubel, 1988, p. 388). It was recommended that resource staff should be provided, night staff levels reviewed and management training programmes be developed for both

clinical and managerial nursing staff (N.H.S. Report, 1987, p. 89).

Situations identified in the United Kingdom (N.H.S. Report, 1987), are similar to the worst aspects of night duty described by respondents in surveys by Coughlin-West (1983) in Canberra and Brown, Brown and Peers (1988) in Perth. Similar circumstances are also viewed with concern in Australian and British texts describing the occupational health hazards of nursing (Sinclair, 1988; Rogers and Salvage, 1988).

From the management practice point of view, night nurses are generally employed as adjuncts to the day staff. The Night Manager (supervisor) appears to have little or no input into staff selection and the rostering of staff on to the night shift (Flynn, 1983). On occasions when inadequate staff levels are available, afternoon managers allocate temporary casual and agency staff to the night shift. This creates a dilemma for the Night Manager who either has to ask regular night staff to move from their ward to high technology areas, or create additional stress for night nurses who have to supervise temporary staff who are often unfamiliar with equipment (Hinch, 1989; Wandelt, Price & Widdowson, 1981).

There appears to be a lack of understanding with day administrative nursing staff of the stressful situations and problems created by insufficient staff levels, unsuitable night staff and the lack of resource staff at night (Kemp, 1984, p. 217; Flynn, 1983, p. 30).

Some Perth teaching hospitals employ one nurse Night Manager to be responsible for the quality of patient care. One individual is expected to competently fill the roles of manager, clinical nurse specialist, educator, quality assurance and infection control personnel (Staff member, Princess Margaret Hospital for Children, personal communication, 29th October, 1989; P.M.H. Night Manager Job description, 1987). These are resource and educational personnel that are considered to be necessary to run a hospital and assist nursing staff during the day.

A recent Public Inquiry Report identified the lack of adequate nursing staff supervision in the evenings and at night as being a cause for public concern (O'Leary, 1989, p. 7). Rogers & Salvage (1988, p. 60) also expressed concern at the number of nurse and patient accidents that occurred at night. They suggested that financial restraints, inadequate staffing levels, the lack of lifting personnel and equipment, insufficient security staff and management apathy were factors.

Brown et al's (1988) respondents identified workload, inability to give quality patient care, inadequate knowledge and nursing skills for specialty areas, and the movement of staff to other wards as stressful situations with medico-legal ramifications for staff and patients. These views were shared by Langslow (1989, p. 39), Flynn (1983, p. 30) and Rutkowski (1987, p. 189).

Sinclair (1988, p. 3) described Australian hospitals as 'having never been well funded'. The availability of funding based on political motives has meant that additional money for staff safety requirements and working conditions have often only been made available when industrial action seemed likely. Sinclair (1988, p. 4), blamed the service orientation of nurses and medical hospital administrators as being the major reason that hospitals differ from other work places in not facing up to working environment conditions.

Night nurses have in fact lost night meal and sleeping facilities in some hospitals as a result of financial restrictions, hospital organizational policies and community expectations. Twenty years ago nursing training was hospital based and the students were required to live in hospital accommodation. Provision was also made for meals and separate sleeping accommodation for night nurses (Della, personal communication, October 23rd, 1989).

Recognition of 'student nurse exploitation'

(Pryde, 1987, p. 80), combined with the move to tertiary training for nurses and technological advances, has meant that the majority of nurses who now work at night are registered. These nurses are in age groups which have family commitments and young children. The current financial climate requires many of these nurses to cope with shift work and study in addition to the roles of nurse, wife and mother (Coughlin-West, 1983, p. 117).

Thus it appears that a combination of factors create additional stress for nurses who are rostered to shifts which include night duty. These factors include:

- * efforts to cope with work, study, marital, sexual and family requirements (Davis, 1984, p. 46).
- * staff levels not related to work load (Scott, 1988).
- * requests at short notice to work in unfamiliar high technology areas (Coffey, Skipper & Jung, 1988).
- * the lack of meal breaks and suitable meals
- * inflexible administrative policies and attitudes (N.H.S. Report, 1987; Dopson, 1988; Scott, 1988).
- * staff selection and rostering policies which do not take the effects of circadian rhythms into account. (Wandelt et al 1981; Flynn, 1983; Jacobsen & McGrath 1983; Rose, 1984; N.H.S. Report, 1987). It has been suggested that these factors cause staff shortages internationally, and are symptomatic of outmoded hospital work organisation (Sinclair, 1988, p. 215).

The chronobiological effects of night work

There appears to have been a general assumption throughout industry and health care organisations that any person at any time could work at night, and any person could cope with shift work which may include night duty (Kemp, 1984, p. 216). Shift work and associated illness and accident rates led to the identification of circadian rhythms (Taffa, 1984).

These cyclical rhythms that have peaks and troughs within a twenty four hour period act as biological pace makers which keep time despite any extrinsic alteration in work patterns (Taffa, 1984, p. 25). Individuals establish their own personal regular cycles that influence eating, sleeping, and times of mental alertness and activity (Rambo, 1984, p. 186). The removal of external cues, such as daylight alters the body's homeostasis and effects the following:

- * temperature, pulse and blood pressure
- * hormonal and chemical secretions
- * drug absorption and action times
- * sleep patterns and sensitivity to noise
- * mental alertness
- * appetite

Sensitivity to extremes of temperature, gastro-intestinal, cardiovascular disturbances and menstrual dysfunction can occur (Hoskins, 1981, p. 572; Rambo, 1984, p. 180; Taffa, 1984, p. 23; Minors,

Waterhouse & Folkhard, 1985, p. 226; Milne & Watkins, 1986, p. 185; Fiedor & Keys, 1987, p. 1167).

Gastro-intestinal disease and myocardial infarction rates have been demonstrated to be directly related to the length of time rotating shifts were worked (Moore-Ede & Richardson, 1985). These conditions are thought to be caused by sustained stress, the lack of appropriate meals and meal breaks at night (Benner & Wrubel, 1989, p. 388; Janowski, 1988, p. 1341) and depleted glucose levels (Sinclair, 1988, p. 220).

Computer acrophase mapping, and the measurement of heart rate, catecholamine and cortisol excretion has been used to confirm subjective responses to questions about stress, fatigue and circadian rhythm adjustment. These have demonstrated that frequent shift change adaptation is rare (Taffa, 1984, p. 23), and that the demands of specific work areas creates greater stress levels than specific shifts (Dr Meredith Wallace, Brain Behaviour Research Institute, personal communication, 6th October, 1989).

Studies have also demonstrated that role demand stress and circadian rhythm desynchronisation has led to differing behaviour patterns which have included:
 * increased smoking and drug taking in an attempt to keep awake or asleep (Jenkinson, 1981, p. xxvii; Sinclair, 1988, p. 215).

- * excessive self medication with sedatives, pain killers and laxatives (Holden, 1985, p. 45).
- * psychological and social isolation, with associated loss of self esteem (Davis, 1984, p. 46; Williamson, et al 1988, p. 166; Fiedor & Keys, 1987, p. 1168).
- * frequent use of poor judgement
- * numerous and repeated errors of judgement
- * expression of negatives and subversive activities
- * failure to contribute to unit or professional growth
- * increased absenteeism as a result of an increase in physical and psychological illness (Halsey, 1985, p. 70).

Nurses unable to adjust to night work have arrived at work fatigued, placed an immense burden on fellow staff members, and demonstrated an overall drop in productivity, accuracy, safety and standards of patient care (Flynn, 1983, p. 3; Fiedor & Keys, 1987, p. 1167; Benner & Wrubel, 1989, p. 388).

Nurses' reduced reaction responses of up to four minutes ('night shift paralysis') were demonstrated to occur in the early hours of the morning when circadian rhythms were at their lowest, and at a time when health crises often occurred (Folkhard, Condon, & Herbert, 1984, p. 510). Quality Assurance Reports in Western Australian hospitals (Della, 1989, p. 16; G. Ennis, personal communication, October 29th, 1989); and studies of shift working

doctors, pilots and sea captains have confirmed that most accidents occur between four and six am (Williamson et al, 1988, p. 166; Williams, 1989, p. 95).

These circumstances suggest that nurses' attitudes toward, and opinions of night duty are therefore based mainly on their ability to cope with night work. This, in turn, depends on the individual's ability to adjust to circadian rhythm maladjustment, inappropriate working conditions and experiences, often the result of unexpected allocations to unfamiliar work areas, roster policies and the pressures of combination roles on the individual and family life. The attitude of nurse managers toward night staff are also factors as they relate to staff selection and roster patterns.

Roster patterns and management attitude

Traditional rostering patterns and administrative attitudes have been described as a major cause of nurses leaving their profession by Prescott & Bowen (1987, p. 63), who considered it was time for administrative attitude change. Sadler (1988, p. 18) found that day staff often viewed night nurses as 'a different breed,' and Kemp (1984, p. 217 & 1985, p. 5) pleaded for more understanding of the needs of nurses at night and for some positive discrimination in favour of night nurses.

Night Supervisors were found by Burke (1986, p. 42), to be less sympathetic to nurses' needs than day administrative staff, as night supervisors did not see maladjusted circadian rhythms as an illness. However, given that night nurse research has recently been undertaken by concerned Night Supervisors, it cannot be assumed that all nurses are unaware of the needs of their night staff (Coughlin-West, 1983; Fiedor & Keys, 1987; Alward, 1987, and the author).

Holdt, (1983, p. 43) discussed the lack of contact between night staff and day administrative staff, who in many circumstances selected night staff and prepared the rosters that the night nurses worked. Inflexible rostering policies were recognized as being a major problem which created negative attitudes and low staff morale due to feelings of 'powerlessness' (Jacobsen & McGrath, 1983, p. 188; Skull & Pinkerton, 1988, p. 69). Shift work review will now be discussed.

Shift work and roster review

Shift work has been identified as a major stressor for nurses (Sinclair, 1988, p. 215; Linder-Peltz, 1985, p. 9 and 1986, p. 42). Marriage and sexual relationships have been found to be severely affected by shift work (Jung, 1986, p. 164; Coffey, Skipper & Jung, 1988, p. 246). Jacobsen & Mc Grath (1983, p. 186) found age and marriage were usually positively correlated with adjustment to stress across

a variety of measures. As a consequence, nurses world wide have taken the initiative, expressed their concerns and reviewed their working hours and roster policies (Barnes, 1980; Mc Gillick, 1983; Ricci, 1984; Imig et al, 1984; Davis, 1984; Burke, 1986; Bacon & Kun, 1986; Barlow, 1986; Betts, 1986; Verhaegen et al, 1987; and The Queensland Branch of the R.A.N.F., 1987). A review of rostering methods has been undertaken in Western Australia with a view of increasing productivity and job satisfaction as part of nursing award negotiations (Della, 1989, p. 26).

Two roster patterns were identified that have been specifically designed for nurse shift workers and take the effects of circadian rhythms into account. Taffa (1984, p. 22), developed a rotating roster that rotated over a sixteen week period and the Babington roster (Sinclair, 1988, p. 218) has been trialled for three years at St George's Hospital in Sydney.

The Babington roster has demonstrated that with participative management, rosters could be arranged to suit the needs of nurses and patients, and top mental and physical performance ensured (Sinclair, 1988, p. 218). This roster has incorporated guidelines from the latest research and adapted it to suit Australian conditions.

Adams, Folkhard & Young 1986, p. 196) and Minors & Waterhouse (1985, p. 241) recommended that the number of successive night shifts should be no fewer than two and at least four; and should be timed to coincide with rest days on weekends where possible, to minimise the effects of shift work. Babington's roster for full time staff is depicted in Figure 1.

Day	F	S	S	M	T	W	Th
Week							
1	-	-	-	N	N	N	N
2	-	-	-	A	A	A	A
3	-	-	P	P	P	-	A
4	A	A	-	-	-	P	P
5	P	-	A	A	A	-	-
6	-	A	A	P	P*	-	-
7	-	-	N	N	N	N	-
8	-	-	-	A*	A	P	P
9	-	-	A	A	A	-	P
10	P	P	P	-	-	-	A
11	A	A	-	-	-	A	P
12	P	P	-	-	P	P	-
13	A	A	P	P*	-	-	-

KEY: N = 9 pm - 7.30 am; A = 7 am - 5.45 pm;
 P = 10.30am - 9.30 pm; * = allocated (additional additional day off).

FIGURE 1: THE BABINGTON ROSTER

(Sinclair, 1988, p. 217)

Two blocks of four nights are worked. A six day break occurs at the end of thirteen weeks. Shift changes are flexible, shift length is dependent on physical and mental work load, and the night shift is shorter than the day shift. The shift rota is forward rotating and regular. There are free weekends, and optional accrued days off. Recommendations from Professor Singer (Brain

Behaviour Research Institute La Trobe University) as described in Holden (1988, p. 28) have been complied with. The inclusion of this roster in this review was considered justified as it contrasted with compulsory rotating roster patterns described in Brown et al (1988) research in Perth. (Appendix A).

The slow change from bureaucratic to participative management in Australian State Government organisations and the introduction of Equal Opportunity and Health and Safety Legislation, with the emphasis on accountability, now makes it acceptable for nurses to question their work conditions and look at the causes of their occupational stress (Arden 1986, p. 5; & 1987, p. 3; Nolan, Lubout & Blyth, 1989, p. 7; Howard, 1986, p. 37). The introduction of the Nurses Career Structure and the professionalisation of nursing with increased numbers of tertiary trained staff, will accelerate the change of nursing management style from autocratic to participative, and provide research based information relative to Australian nurses (Brown, B., 1988, p. 4). Night nurse related research will now be reviewed.

Night nurse and night shift work related research

Research related to permanent night nurses and night shift workers has until recently predominantly been reported in non nursing literature. It has, however, been readily available, associated

with Occupational Health and Psychological disciplines that have undertaken shift work and chronobiological research.

Nurses have been included in research related to circadian rhythms, job satisfaction, occupational stress and shift work (Stamps & Piedmonte, 1986, p. 11; Milne & Watkins, 1986, p. 144; Vidacek et al, 1986, p. 1553; Hale, 1986, p. 44). The effect of circadian rhythms on shift workers was predominantly researched in industry (Kemp, 1984, p. 218; 219; Taffa, 1984, p. 24). When compared with other workers, nurses experienced less sleep because of the physical and mental stress of nursing (Minors et al, 1985, p. 266), attended health clinics more frequently when on rotating shifts (Milne & Watkins 1986, p. 139; Hale, 1986, p. 44; Stamps & Piedmonte 1986, p. 11), suffered more psychological complaints (Frost & Jamal, 1979, p. 509) and had high divorce rates (Sinclair, 1988, p. 226). Hale (1986, p. 44) warned against relating industrial research and other nursing research to Australian nurses and advised that specific nursing research should be developed to suit local needs.

Specific night nursing related research has been confirmed to be in its infancy (Kemp, 1984, p. 217; Milne & Watkins, 1986, p. 186; Jung, 1986, p. 161; Williamson et al 1988, p. 162). In view of the limited nature of night duty research, and the fact that much related research has been published in non

nursing journals, a review is included for those readers who may be interested in Appendix A.

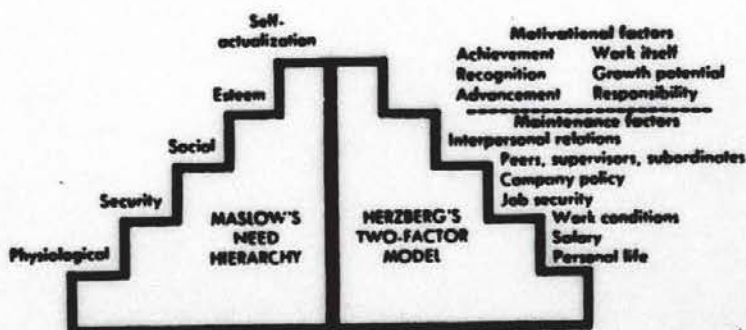
In view of the fact that there was no appropriate related research that could be replicated, it was necessary to use the literature reviewed to develop a conceptual framework and instrument related to Australian conditions.

This study therefore, continues Australian 'night nurse research' commenced in 1983 by Coughlin-West and replicated in 1988 by Brown, Brown and Peers.

CHAPTER 3.

THE THEORETICAL FRAME OF REFERENCE.

An individual's attitude toward work and job satisfaction is influenced by personal goals, values and beliefs, interpersonal relationships, work settings, organisational policies, and specific aspects of the job (Baron, 1986, p. 154). Herzberg's Motivator-hygiene theory suggested that job satisfaction stemmed from the presence of motivators: achievement, recognition, advancement and responsibility which lead to positive attitudes toward work. However, their absence has not proven job dissatisfaction. (P. L. Stamps & E. B. Piedmonte, 1986, p. 3.; Baron, 1986, p. 154). When viewed with Maslow's hierarchy of needs, demonstrated in Figure 2, Herzberg's theory assists in the understanding of human motivation to work.



**FIGURE 2: COMPARISON OF MASLOW & HERTZBERG
MOTIVATION THEORY MODELS**

(Marriner-Tomey, 1988, p. 199)

Participative managers seek to assist their workers to attain self actualization by responding to the needs of individuals. They delegate, encourage groups and individuals to participate in the solving of their perceived problems, and use incentives such as praise and recognition. In contrast, autocratic managers emphasise the goals of the organisation, with little consideration for the individual workers (Marriner-Tomey, 1988, p. 199).

The Brown et al (1988) study demonstrated that autonomy on night duty was important to nurses, but was overshadowed by negative hygiene factors and autocratic administrative management. The hospital policies required compulsory participation in night shift work and failed to recognise the personal needs of the nurses. Lack of consultation by administrators and day staff, and the lack of concern shown for safe staffing levels and work conditions at night were problems which appeared to create negative attitudes toward night duty. Pay status for working unsociable hours was also an issue (Brown, Brown, & Peers 1988).

Subjective anecdotal comments made in response to open ended questions in Brown, Brown and Peer's instrument identified the stresses associated with working at night. Factors seen as major issues affecting attitude toward night duty included the

effects of night duty on personal wellbeing, family and social activities, and the ability to provide safe quality patient care. These comments confirmed Hertzberg's hypothesis that these factors lead to negative attitudes and low job satisfaction. The fact that some nurses indicated that they requested specific contracts or changed shifts to avoid night duty because of the effects of chronic fatigue demonstrated the adaptation process which is covered by the General Systems Theory and Roy's Nursing Theory of Adaptation.

The General Systems Theory was developed by Bertalanffy, Miller, Bertram and others and has been adapted by nursing theorists Roy, Newman, and King to develop problem solving, decision making, and the nursing process in nursing theoretical models (Chinn & Jacobs 1987, p. 193). Palmer (in Putt, 1987, p. 176) described the general systems theory as simple, being ideal for identifying issues and problems, and then planning appropriate resolutions. It is understood by all disciplines of health professionals therefore permitting communication on common ground.

Gillies, (1982) has related the theory to nursing management and Putt (1978) and Hall & Weaver (1985) to nursing in hospital and community settings (Figs 3, 4, 5, overleaf).

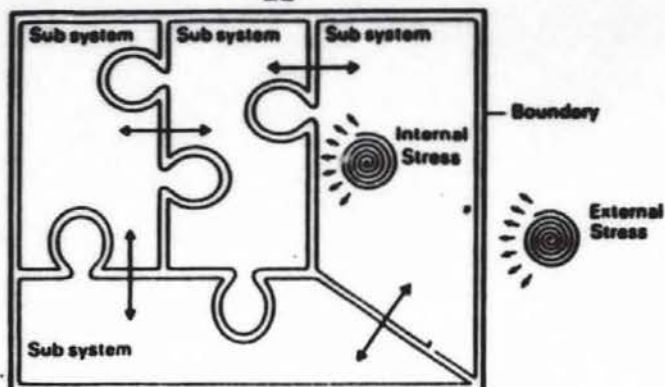


FIGURE 3: A WHOLE SYSTEM

(Pearson & Vaughan, 1986, p. 28)

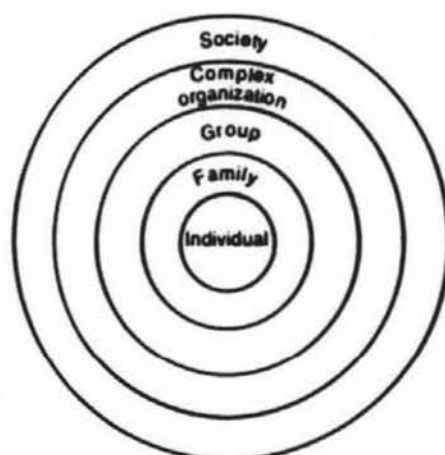


FIGURE 4: NURSES IN A HIERARCHY OF SYSTEMS.

(Hall & Weaver, 1985, p. 31)

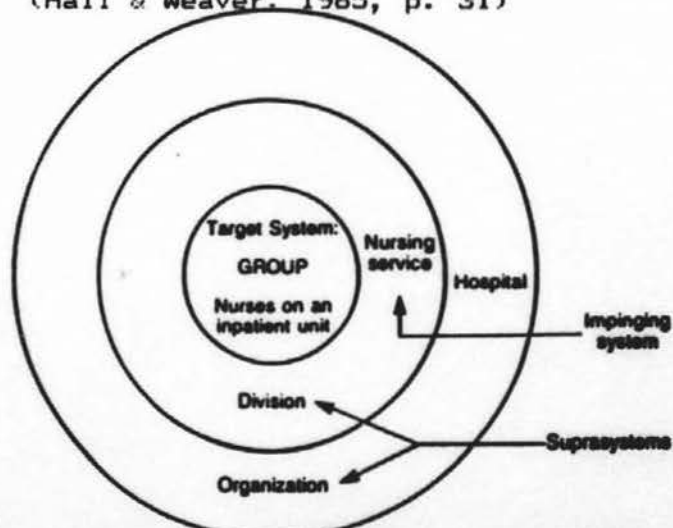


FIGURE 5: NURSES AS A GROUP WITHIN A HOSPITAL

(Hall & Weaver, 1985, p. 188)

With reference to Figure 3, a system is a set of components or units which are interdependent. It has a clear boundary and is affected by internal and external stresses. A system continually adjusts to internal and external stresses to adapt and survive. All living systems are open systems, in continual interaction with the environment. A system may be an inferior or superior system within a hierarchy of systems or described as a target system. Nurses can be viewed as individual systems within the hospital hierarchy (Figure 4) and as a target group within the hospital organization. (Figure 5).

According to Gillies (1986, p. 61) classic system elements include 'inputs' or stimuli to which a system responds. Change and learning occurs permitting the system to adapt as 'throughputs.' The resultant 'outputs' may affect sub or hierarchical systems. Feedback loops permit reassessment of the outputs and decision making, permitting the system to continually adapt to survive. A classic system is demonstrated in Figure 6.

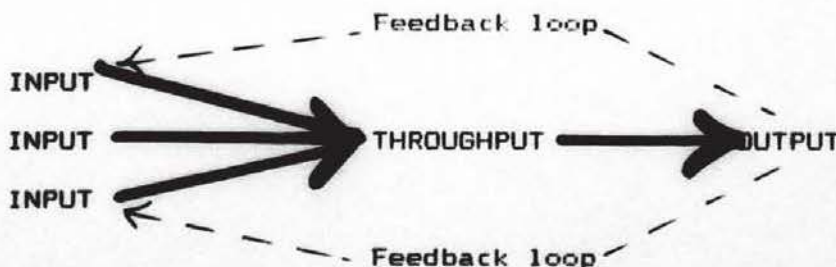


FIGURE 6: CLASSIC SYSTEM ELEMENTS.

(D. A. Gillies 1982, p. 61)

Callista Roy used the General Systems Theory as a basic model for her Nursing Theory of Adaptation and has viewed a human as an open adaptive system, receiving both internal and external inputs from the environment. These stimuli, processed by the individual, produce effective or ineffective responses to attain the goals of survival, growth, self mastery and wellness. The outputs, either positive or negative, are then fed back into the system for reassessment. In this way an individual continually influences and is influenced by the environment (Duldt & Giffin, 1985, p. 244). Figure 7 demonstrates Roy's Theory of Adaptation where she sees an individual as a system.

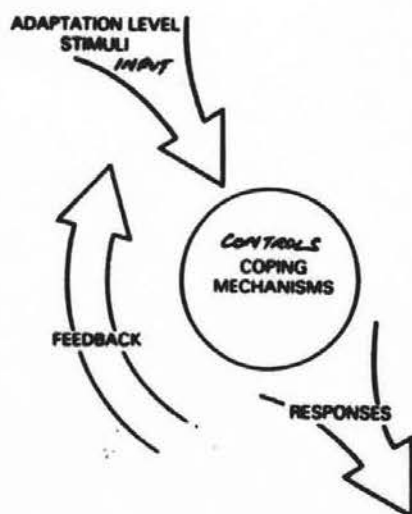


FIGURE 7: THE PERSON AS A SYSTEM

(H. H. Andrews and C. Roy 1984, p. 22)

Adapting the general systems theory, the nurse can be considered as an individual system, continually interacting with his/her environment, either at home, at work, or within the community. Within the hospital environment, the nurse is a subsystem of the hospital organisation.

As an integrated being with biological, physiological and social components, the nurse responds to 'inputs' e.g. working hours, rostering policies, and work conditions. She/he makes choices and decisions as to how to cope with these inputs as part of the adaptation process. Should, for example, the roster system make it impossible to cope, the nurse develops negative attitudes and may not turn up for work. This in turn 'feeds back' and affects her nursing colleagues, nurse management and the hospital organisation as a whole. Should circumstances be so severe and stressful, she may feel it necessary to leave the organisation. The employer then has the costs of replacing the nurses, and fellow nurses may have to carry an additional work load until a replacement is found. Conversely, should the nurse cope well with night duty and enjoys the autonomy, she may choose to work night duty permanently.

The concepts of Hertzberg, Maslow, the General Systems Theory and Roy's Nursing Theory of Adaptation are combined in Figure 8: - 'Nurses and Night Duty'. Personal, motivational and hygiene factors are seen as environmental inputs. In response to these inputs, ability or inability to adapt to cope with organizational and management practices, positive or negative attitudes toward night duty will develop as the result of the present and past experience (Miller & Keane, 1987, p. 125). Should negative attitudes persist, and there is no prospect of changing the work situation, low job satisfaction occurs. This leads to attempts to change job status or role. Should this not be possible, increased absenteeism occurs and eventually leads to attrition. Feed back to the employer occurs in the form of costs of replacement and staff shortage. The nurse also experiences stress as a need to change his/her work place.

Alternatively, positive attitudes lead to coping with night duty, job satisfaction and happiness at work (Keane, 1981, p. 91).

This model served as a guide for the development of the questionnaire and interpretations of data. The next chapter develops the research design for the present study.

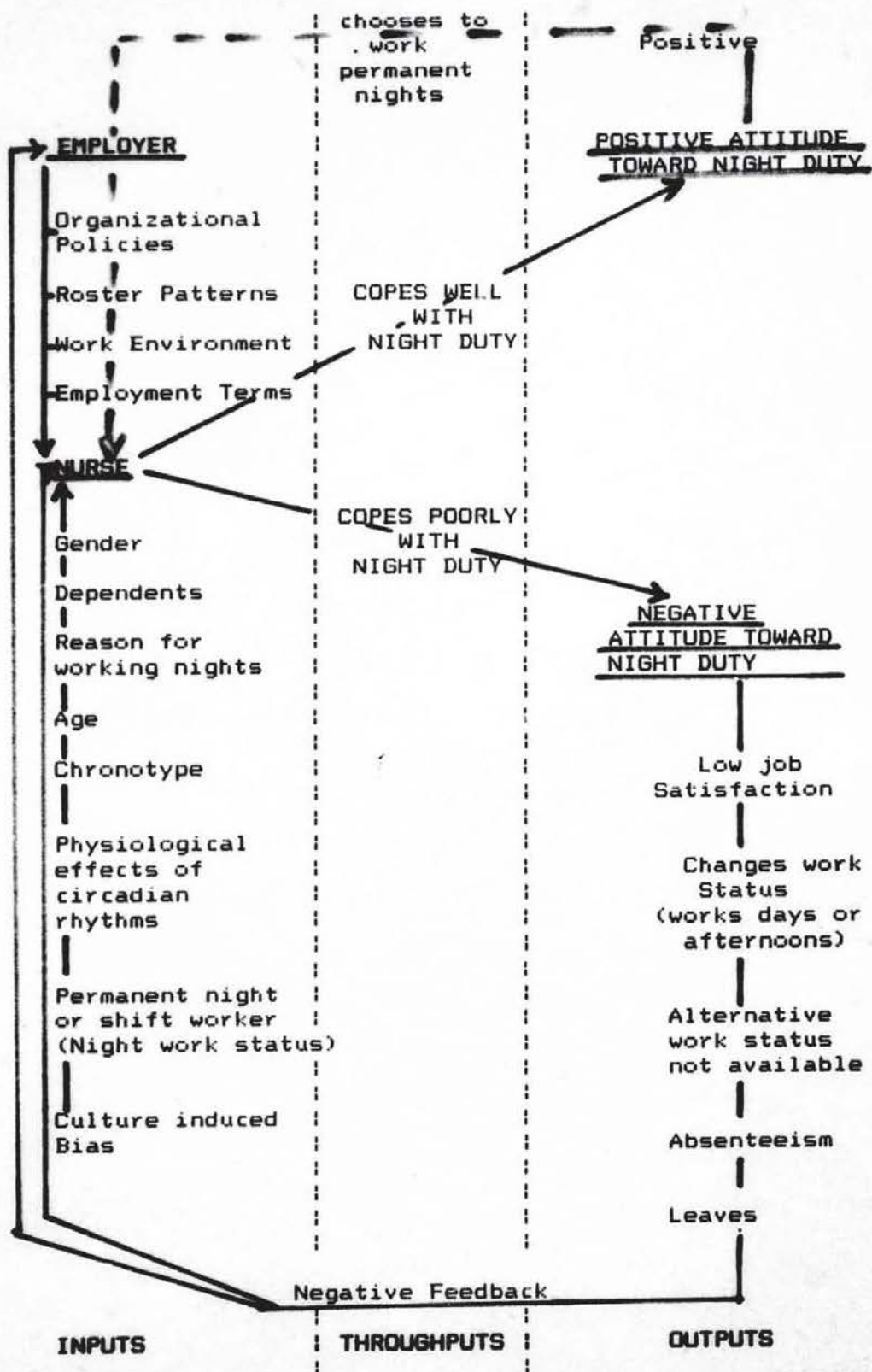


FIGURE 8 : NURSES ATTITUDES TOWARD NIGHT DUTY
(The author's own synthesis)

CHAPTER 4.

THE RESEARCH DESIGN.

The question for study and study design

The literature review has demonstrated that nurses' attitudes toward night duty appear to be influenced by prior and current work experience, the motivation to work night shift, hospital organisation, employment policies, working conditions and roster patterns. Combined with the chronobiological factors of age and chronotype, these factors influence the amount of sleep that a nurse is able to obtain when working night duty. The ability to cope varies from person to person. However, chronic fatigue leads to circumstances which affect the nurses' families, social life, colleagues, and quality of patient care.

Nurses, although health professionals, have not been leaders in the design of non stress producing rosters as a result of outmoded work organisation, the lack of appropriate research data and nursing managerial training. Research has also established that nurses appear to have predominantly negative attitudes toward working at night.

This descriptive exploratory study seeks to identify if nurses' attitudes toward night duty are influenced primarily by their work environment or by demographic circadian and chronobiological factors.

Definitions

The following definitions were used throughout this study.

Attitude:- 'ones disposition or outlook.... to behave in a predetermined way' (Krebs, 1986, p. 52). This study examines the attitude of nurses to night duty.

Night duty:- a shift worked during the hours of darkness which may vary in length depending on employment terms, award and hospital policies.

Night shift worker:- a person rostered to work night duty for variable periods of time. The rostered hours may have identifiable patterns e.g. blocks of night duty, or rotating cycles that include morning shifts, afternoon shifts, and night shifts.

Night worker:- a member of the nursing complement who is employed to work night duty on a permanent basis either full or part time.

Nursing complement:- Persons employed and counted as part of the nursing establishment of a hospital organisation. These persons may be registered nurses, registered enrolled nurses, student nurses and nursing assistants employed in any category or role.

Work environment:- includes the effects of hospital organisational and management policies, where rosters are prepared, the provision of meals and meal breaks at night, and staffing levels

Circadian and chronobiological factors:- age, sleep pattern, and chronotype (Night owl or morning lark personality) and the maximum period of time a nurse feels that she could cope with night duty.

Registered nurses and enrolled nurses :- Categories used by the Nurses Board of Western Australia to register nurses on the completion of their training.

Student nurses:- nurses undertaking their training within the general or mental health disciplines, either in a hospital based or tertiary programme.

Nursing assistants:- unregistered persons, employed as part of the nursing complement.

The planning of this study

It was felt that this study should complement the current Western Australian Review of Alternative Rostering Systems. Therefore the co-ordinator of this project, had informal discussions with the nursing administrators of various hospitals that would provide a variety of work conditions and roster patterns. These administrators had read the report of Brown, Brown and Peers (1988) research that replicated and expanded Coughlin-West's (1983) study.

Objectives

Following these discussions the following objectives for this study were identified.

1. To identify nurses' attitudes toward night duty and to research the causes of these attitudes.
2. To identify if nurses' attitudes toward night duty are influenced primarily by their work environment or by demographic, circadian and chronobiological factors.
3. To investigate if the subjective responses to night duty as identified in Coughlin-West (1983) and Brown et al. (1988) are of concern in the hospitals involved in the present study
4. To identify the characteristics of nurses who are most likely to cope best with night work.

Research method and design

It was evident that the time available for this study would limit both the sample size and the analysis of data obtained. For this reason, the format of an exploratory survey with a descriptive cross sectional design was chosen.

A sample of two hundred and fifty nurses seemed sufficient to demonstrate nurses' attitudes toward night duty in the six participating hospitals.

It was accepted that should more respondents be available they would be included in the study. This sample population had limitations in that it is relevant to specific employer organisations, and cannot, therefore, be considered to reflect the views of all Western Australian or Australian nurses.

As previous research has focused on specific nursing groups, this study's inclusion criteria for subjects were identified as:

All members of the nursing establishment of a particular hospital, regardless of category or role. These persons could be Registered Nurses (General, Mental Health and Midwives) Enrolled Nurses (General and Mental Health); Student nurses (General or Mental Health) and Nursing Assistants.

Ethical implications

The ethical standards of this study conformed to the moral, legal and ethical standards of scientific enquiry. The letter of invitation to participate and explanation of why the study was being undertaken (Appendix C), was seen as aids to securing informed consent from participants. Participation was voluntary, and respondents had the right to withdraw or decline from answering specific questions without any penalty. Procedural guidelines were offered to ensure that anonymity could be maintained.

No link was possible between the respondents and the questionnaire.

Following the review of the Research Proposal by the School of Nursing Ethics Committee, formal approach by letter (Appendix B) was made to the hospitals and some very enthusiastic and complimentary letters were received, with Nurse Administrators expressing their approval of management related research being undertaken.

The instrument

Data was collected by a questionnaire developed by the investigator. Thirty percent of the instrument had been used previously (Coughlin-West 1983; Brown et al. 1988) and was expanded for this study. The remaining questions were developed from data obtained from the open ended questions in these studies and from information obtained from literature and research reports (Fiedor & Keys 1987, p. 1168; Alward, 1988, p. 1336). Further items were included to identify demographic, circadian, chronological, roster system and work environment factors that may have an influence on nurses' attitudes toward night duty and to achieve the objectives of this study.

The expanded questionnaire was tested for content and face validity and response time in a pilot study undertaken at the Western Australian College of Advanced Education. Thirty practising

nurses enrolled in the Bachelor of Health Science Nursing programme volunteered to answer the questionnaire.

Following an analysis of these questionnaires certain items were modified to make them more easily understood. The resultant questionnaire (Appendix D) consisted of thirty three questions in the following sub sections.

CONTENTS	ITEMS
Demographic factors	1 - 10
Motivation to work at night	11
Attitude	12 - 15
Preparation of rosters	16
Sleep patterns and chronotype	17 - 18
Input in relation to night rosters	19 - 20
Aspects of night duty, work practices and working conditions.	21 - 33

Questions 1 - 10 obtained demographic information about the respondents.

Question One identified gender. Question Two asked if there were any dependents to support to ascertain if the nurses had both home and work responsibilities which could influence attitude or ability to work at night. It was not felt necessary to specifically identify the type of the dependents. Previous attempts to do so by Coughlin-West (1983) and Brown et al (1988) produced confused responses. It was felt that

question eleven would clarify if the reason for working night duty was related to personal and family circumstances.

Question Three identified employment category - registered nurse, enrolled nurse, student nurse or nursing assistant.

Question Four identified employment terms as being full time, part time, casual, agency or other. This information was required as it is related to the type of roster systems or patterns and night duty employment policies.

Question Five identified the nursing role of the respondents. The categories used were managerial, educational, clinical, research and a combination role of any of these categories.

Question Six identified the type of educational institution where nursing education had been received. This information was required to ascertain if night duty may have been experienced as a student. This information relates to possible culture induced bias toward night duty because of student experience and expectations.

Question Seven identified the country of initial nursing registration, again related to culture induced bias.

Question Eight requested identification of age group, required to identify relationships with sleep and chronotype in order to possibly identify nurses most suited to work at night and attitude toward night duty.

Question Nine asked respondents to identify the hours they had worked most in the last three months. This permitted identification of night staff employment policies and the identification of work groups that did not currently work at night.

Question Ten asked for identification in months of the longest period that had ever been worked on night shift. It was accepted that the answer could be related to past rather than present employment, but was used to obtain an indication of experience on night duty. This was necessary because of the inclusion of questions that relate to work night duty work practices and concerns.

Question eleven asked for identification of the main reason that a nurse would work night duty, or the reason that would make a nurse change to working nights if not currently doing so. The result was required to obtain reasons for motivation to work at night to assist in overcoming staff shortages.

Question twelve was designed to identify the factor which most influenced nurses attitudes toward night duty thus providing the answer to the research question.

Questions thirteen to fifteen obtained attitude information and information related to the effect night duty on the individual. Question thirteen asked if night duty affected personal and social life more, less or about the same as other shifts worked.

Question fourteen was a measure of attitude asking if night duty was preferable to working during the day. Question fifteen asked if night duty was seen to be challenging, enjoyable, satisfying, frustrating or absolutely hateful.

Question sixteen identified where rosters were prepared and indicated the type of management practice i.e. traditional autocratic or participative. It was also required to ascertain if night nurses had any input into their roster patterns.

Question seventeen related to the type of sleep experienced at night to ascertain if chronic fatigue was a problem and also if roster patterns were related. Question eighteen asked respondents to indicate if they were 'night owls' or 'morning larks' and relates to the research of Alward (1988).

Question nineteen obtained information about the type of roster pattern which would suit individuals the best if they had to work night duty. The options included permanent night duty, night shift work, fixed rotating rosters, night duty in a block of six weeks. As some respondents in Brown et al. (1988) study had indicated that they could not under any circumstances work at night, two options were included - none of these, I would rather change my role and I would rather leave than work at night.

Question twenty was included in an attempt to identify the maximum period of time that nurses felt they could work at night without feeling stressed. This relates

to previous industrial shift work research.

Questions 21 to 33 include 'the worst aspects of night duty' as perceived by respondents in the studies of Coughlin-West (1983) and Brown et al. (1988).

A Likert Scale was used to identify attitude toward these work practices and situations by asking respondents to indicate the degree of stress or concern they feel about each issue. These questions relate to personal and educational needs of night staff, communication barriers between day and night staff, being asked to work in unfamiliar work areas, the availability of meals and meal breaks, staffing levels and resource staff, the timing of lectures and meetings, and the preparation of night rosters. All of these situations have been identified in the British N.H.S. Report (1987) and were identified by Fiedor & Keys (1987) and Flynn (1983) as work organisational practices and situations that affected nurses' ability to cope with night work.

A note of thanks completed the questionnaire and respondents were invited to comment on night duty if they chose to do so, by using the back of the questionnaire.

Distribution of the questionnaires

Sufficient questionnaires were supplied to enable all members of the nursing establishment to participate. Arrangements were made with each hospital's administrator for the questionnaires to be delivered to and collected from labelled receptacles in the work areas by the researcher or, where necessary, by a volunteer. Volunteers then delivered the questionnaires to a central point for collection by the researcher.

Volunteers were asked to stress that participation was voluntary and that if procedures were followed as indicated in the letter attached to the questionnaire, anonymity could be assured. Staff in the area were asked to draw attention to the study and told that questionnaires would be available in the work area for a maximum period of one week. Arrangements were made for absent staff to participate on their return if they chose to do so. These questionnaires were then delivered to a collection point or returned to the researcher by post.

Data analysis

The research data was analysed by computer and the results are presented in written, tabular and graphic form in Chapter 5.

CHAPTER 5.PRESENTATION OF THE RESULTS

The research was undertaken in six Western Australian hospitals. Figure 9 shows the distribution of the respondents by hospital. Hospitals A, B, D, E and F are situated within the Perth metropolitan area. Hospital C is situated in the country. Hospitals A and C are general hospitals. Hospitals B, D, E, and F are psychiatric hospitals. This combination was selected to achieve a wide variety of working conditions. The nurses work under different industrial awards and Western Australian Health Department policies within the general and psychiatric sector.

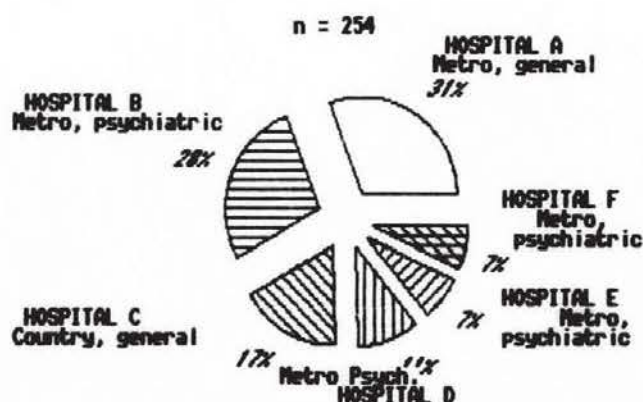


FIGURE 9: DISTRIBUTION OF RESPONDENTS BY HOSPITAL.

The response

Five hundred and sixty questionnaires were distributed to members of the nursing staff in the six health care institutions, matching 'total head count staff numbers' provided by the administrative staff.

Two hundred and fifty four (61%) questionnaires were returned from one four hundred and nineteen staff 'available' during the week the questionnaires were left in the work areas. The 'staff available' number is calculated by dividing the total staff number by 1.4 (Research and Development Bureau of Western Australian Health Department). Table 1 shows for each hospital the total number of nursing staff, the staff available to answer the questionnaire, the number of respondents, the percentage return and the gender of the respondents.

TABLE 1: QUESTIONNAIRE RESPONSE RATE

HOSPITAL	TOTAL STAFF	STAFF AVAILABLE	RETURN NO	PERCENT RETURN	MALE	FEMALE
A	150	107	78	73%	5	73
B	220	157	70	45%	39	32
C	47	44	44	100%	1	43
D	100	72	27	36%	14	12
E	31	22	18	82%	9	9
F	17	17	17	100%	6	11
TOTAL	565	419	254	61%	74	180

The questionnaires were collected from the work areas in all hospitals after ten days and ten questionnaires were returned by post. Having noted the lower return rate, the collection time was extended to twenty one days for Hospitals B and D. However, there was only a minimal increase in the number of questionnaires returned.

Gender

Table 1 shows the distribution of males and female respondents within the hospitals surveyed. Table 2 indicates that more males are employed within the psychiatric sector i.e. Hospitals B, D, E, and F. In the general hospitals (A and C) the majority of the staff are female. There is no evidence to suggest that the response rate is related to gender.

TABLE 2:
GENDER OF STAFF EMPLOYED IN THE GENERAL AND
PSYCHIATRIC HOSPITALS

GENDER	MALE	%	FEMALE	%	TOTAL
Psychiatric Hospitals	68	51.5%	64	48.5%	132
General Hospitals	6	5.0%	116	95.0%	122
TOTAL	74		180		254

The Australian gender percentage distribution of certificated hospital nurses is 6.4% male and 93.6% female (Sinclair, 1988, p. 2).

Dependents

Table 3 shows that the majority of the respondents did not have dependents to support. One person did not answer this question.

TABLE 3: RESPONDENTS WITH DEPENDENTS TO SUPPORT

DEPENDENTS	NUMBER	PERCENTAGE
With dependents	119	47
No dependents	132	52
Did not answer	3	1
TOTAL	254	100

Employment categories

The employment categories are displayed in Table 4. As all members of the nursing complement were eligible to participate, registered nurses, enrolled nurses, student nurses and nursing assistants were the selected categories.

TABLE 4: EMPLOYMENT CATEGORIES

EMPLOYMENT CATEGORIES	NUMBER	PERCENTAGE
Registered Nurse	194	76
Enrolled Nurse	45	18
Student Nurses	13	5
Nursing Assistant	1	.5
No answer	1	.5
TOTAL	254	100

Employment terms

Respondents were given five categories to enable identification of terms of employment and working hours. These categories were full time, part time, casual, agency and other. Table 4 permits comparison of staff employment patterns between the six participating hospitals, dictated by two industrial awards and Health Department Policies.

TABLE 5: EMPLOYMENT TERMS BY HOSPITAL

EMPLOYMENT TERMS	HOSPITAL						TOTAL
	A	B	C	D	E	F	
Full time	45	67	19	26	18	16	191
Part time	29	1	22	0	0	1	53
Casual	4	1	2	1	0	0	8
Agency	0	0	1	0	0	0	1
Other	0	0	1	0	0	0	1
TOTAL	78	70	44	27	18	17	254

Nursing role

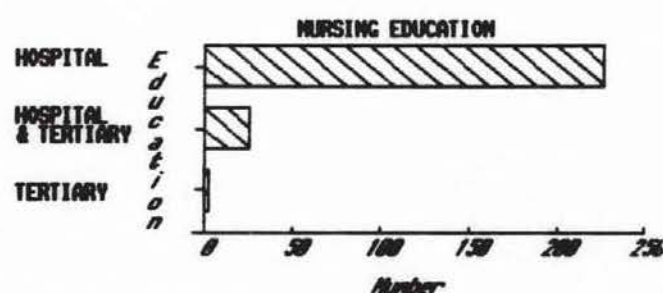
The nursing roles of the respondents are shown in Table 6 in four categories. Ten did not answer.

TABLE 6: NURSING ROLE

ROLE	NUMBER	PERCENTAGE
Clinical	192	76
Combination	34	13
Managerial	14	6
Educational	4	2
No answer	10	4
TOTAL	254	100

Nursing Education

Figure 10 shows that the majority of the nurses, 227, (89.6%) were educated in hospital based Schools of Nursing. Twenty five (9.6%) have hospital based and tertiary education and two only were tertiary nursing school graduates.

FIGURE 10: TYPE OF NURSING EDUCATION n = 254

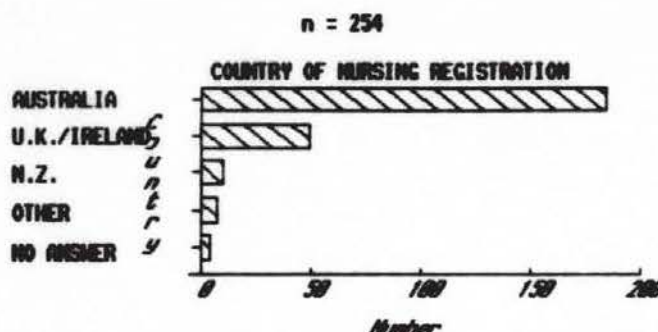


FIGURE 11: COUNTRY OF INITIAL NURSING REGISTRATION

Country of initial nursing registration

The type of nursing education is related to Figure 11 which shows the country of initial nursing registration. 243 (96%) of the nurses first registered in Australia, the British Isles or New Zealand, countries that until recently had hospital based schools of nursing based on the British system. Seven (2.8%) did not fit the questionnaire categories which included Australia, N.Z., United Kingdom/Ireland, U.S.A./Canada, India/S.E. Asia, South Africa and other. Four refrained from answering the question. There were no respondents who initially registered in U.S.A./Canada, India/South East Asia, or South Africa

Age groups

Table 7 shows the six age groups by hospital distribution and the total for each group.

The dominant age group to be 30 - 39 years.

TABLE 7. AGE GROUPS WITHIN HOSPITALS

HOSPITAL	AGE GROUPS						TOTAL
	17-19	20-29	30-39	40-49	50-59	60-65	
A	0	17	32	22	7	0	78
B	0	18	28	13	7	0	70
C	0	10	18	9	6	1	44
D	0	8	10	3	5	1	27
E	0	3	13	2	0	0	18
F	0	5	6	5	1	0	17
TOTAL	4	61	107	54	26	2	254

As Brown et al. (1988) felt that difficulties in coping with compulsory shift rotation may have been related to age, a comparison of age group distribution of staff in the general and psychiatric hospitals was made. Some similarity of age group distribution is demonstrated in Figures 12 and 13. However in the Psychiatric Hospital sector there are less in the 40 -50 years group and more in the <30 years groups than in the General Hospital sector.

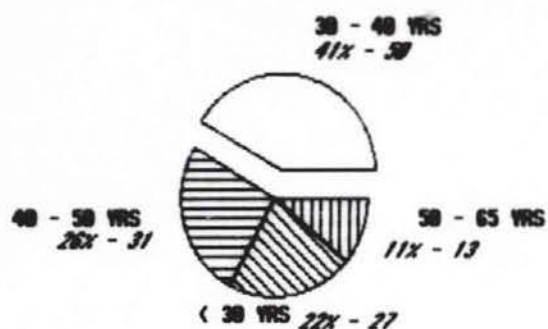


FIGURE 12.

AGE DISTRIBUTION IN THE GENERAL HOSPITALS A & C

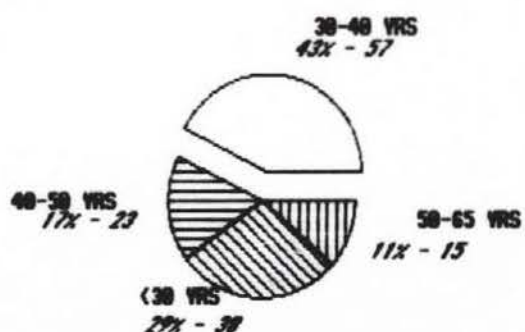


FIGURE 13

AGE DISTRIBUTION IN PSYCHIATRIC HOSPITALS B, D, E, F.

Hours worked most in last three months

Question 9 enabled night work groups to be identified and those whose role excluded night duty. The respondents selected the category that they had worked most within the last three months and the results are demonstrated in Table 8 as night work groups in each hospital. Five respondents did not answer.

TABLE 8.

HOSPITAL DISTRIBUTION OF RESPONDENTS IN NIGHT WORK GROUPS.

HOSPITAL CATEGORY	TOTAL	A	B	C	D	E	F	
Permanent night shift	23	8	7	1	0	1	40	
Night shift work	6	8	27	13	12	14	79	
Role excludes nights	40	15	4	5	6	2	73	
Days with night call	8	3	3	0	0	0	13	
Compulsary rotating roster including night	0	35	2	7	0	0	44	
No answer	1	1	1	1	0	0	5	
TOTAL	78	70	44	27	18	17	254	

Table 8 demonstrates differences in rostering policies associated with industrial awards. The general hospitals, A and C employ more permanent night staff than the psychiatric hospitals, B, D, E, and F where with the exception of Hospital F, compulsory rotation to night duty is required unless staff are excluded from doing so by specific contract.

The longest period of night duty

Question 10 asked respondents to indicate the longest period they had ever worked night duty. Twelve different time periods were identified. These were condensed to the seven categories identified in Figure 14. The majority of respondents included in the less than six months category has worked night duty for a maximum period of two weeks. Four had worked in excess of fifteen years. Twenty one failed to answer the question.

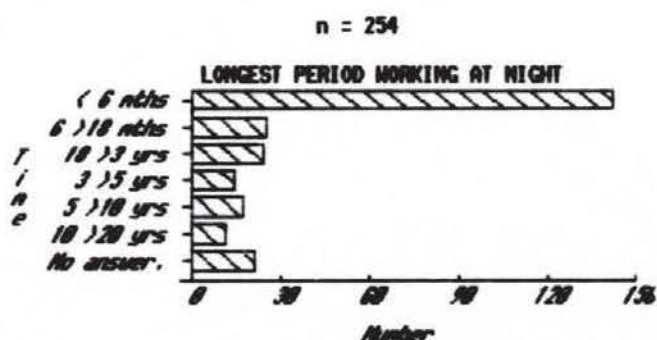


FIGURE 14: LONGEST PERIOD OF NIGHT DUTY WORKED

As there was a consistent pattern of fifteen to eighteen respondents who did not answer questions ten to twelve inclusive, it was assumed that these nurses felt the questions did not relate to them.

Main reason you would work night duty

The reasons that nurses would work night duty are shown in Table 9. Eighteen did not answer the question. Three of these respondents indicated that under no circumstances would they work night duty. Table 9 shows that hospital policy dominates over reasons related to personal needs.

TABLE 9: REASON FOR WORKING NIGHT DUTY

REASON	NUMBER	PERCENTAGE
Hospital Policy	119	47%
Family circumstances	59	23%
Tertiary lectures	18	7%
Only employment available	17	6%
Preferred shift	12	5%
Financial gain	11	4%
Did not answer	18	7%
TOTAL	254	100%

Factor that most influences attitude toward night duty

Figure 15 shows the direct answer to the research question. One hundred and sixty six respondents (65%) indentified factors related to the chronobiological effects of working at night. In comparison seventy three (29%) identified factors related to work practices, work conditions, hospital policies and roster patterns. Fifteen did not answer.

n = 254

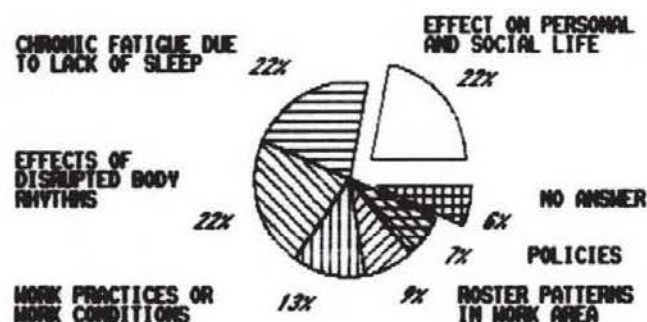


FIGURE 15: FACTOR WHICH MOST INFLUENCES ATTITUDE
TOWARD NIGHT DUTY.

Night duty compared with other shifts

Questions 13 asked nurses to compare the affect of night duty on personal and/or social life with other shifts. The answers are demonstrated in Figure 16.

n = 254

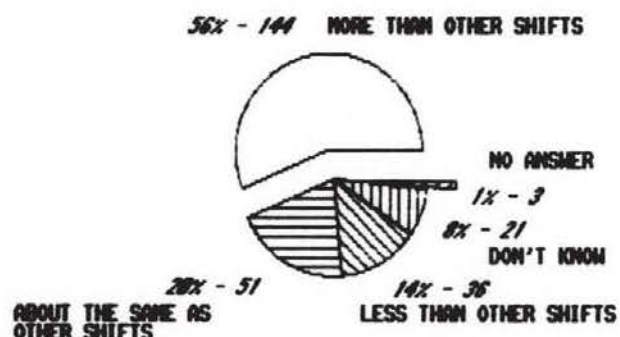


FIGURE 16. NIGHT DUTY COMPARED WITH OTHER SHIFTS
THE AFFECT ON PERSONAL AND/OR SOCIAL LIFE.

Fifty six percent felt the effect was more than other shifts compared with thirty four percent who indicated the effect was the same or less. Twenty one respondents indicated they did not know, and three did not answer the question.

Is night duty preferable to day work

Question 14 asked respondents to indicate if working night duty was preferable to working during the day. One hundred and fifty seven answered no, fifty seven answered yes, and thirty nine felt there was no difference. One person did not answer the question. The results are demonstrated in Figure 17.

n = 254



FIGURE 17.

FOR YOU IS NIGHT DUTY PREFERABLE TO WORKING DAY?

Clearly, sixty two percent did not prefer night work compared with thirty seven percent who found night duty no different or preferable to working during the day.

Tables 10 and 11 indicate the responses to Question 14 by gender, age, chronotype, nursing role and night group (hours of work).

TABLE 10 - IS NIGHT PREFERABLE TO WORKING DAYS

AGAINST GENDER, AGE, CHRONOTYPE

GENDER	N.A.	YES	NO	NO DIFF	TOTAL
Male	-	13	46	15	74
Female	1	57	157	24	180
TOTAL	1	70	203	39	254
p > 0.05 $\chi^2 = 3.162$ df = 3 Phi coeff = 0.112					

AGE	N.A.	YES	NO	NO DIFF	TOTAL
17 - 19 YRS	0	1	2	1	4
20 - 29 YRS	0	9	41	11	61
30 - 39 YRS	0	31	65	11	107
40 - 49 YRS	0	10	34	10	54
50 - 59 YRS	1	5	14	6	26
60 - 65 YRS	0	1	1	0	2
TOTAL	1	57	157	39	254
p > 0.05 $\chi^2 = 18.299$ df 15 Phi Coeff = 0.268					

CHRONOTYPE	N.A.	YES	NO	NO DIFF	TOTAL
Morning Lark	1	12	61	10	84
Night owl	0	28	50	14	92
Dont Know	0	17	44	15	76
No answer					2
TOTAL	1	57	155	39	254
p > 0.05 $\chi^2 = 12.569$ df = 9 phi coeff = 0.222					

TABLE 11. IS NIGHT DUTY PREFERABLE TO DAY DUTY
AGAINST WORK GROUP AND NURSING ROLE

WORK GROUP	YES	NO	NO DIFF	TOTAL
Permanent night	32	8	0	40
Rostered to night	13	54	12	79
Role excludes night	2	57	13	72
Day plus night call	1	12	0	13
Compulsory rotating roster	9	23	12	44
No answer				6
	99	154	37	254
$p < 0.05$ $\chi^2 = 109.947$ $df\ 15$ Φ coeff = .658 Cramers V = .380				
NURSING ROLE	YES	NO	NO DIFF	TOTAL
Managerial	3	11	0	14
Educational	0	1	3	4
Clinical	44	118	30	192
Combination role	7	21	6	34
No answer	3	7	0	10
	57	158	39	254
$p > 0.05$ $\chi^2 = 16.277$ $df\ 12$ Φ co-eff = 0.253				

Although summary statistics have been provided these results must be viewed with caution as they are limited and possibly inaccurate. In all categories tested the computer has indicated that the chi-square may be inaccurate as cell counts were insufficient. Linking of cells would be necessary to produce more accurate results. Work group category was the only significant correlation.

Feelings about night duty

Figure 18 represents the data obtained from Question 15 with the categories of 'frustrating and hateful' combined, and the sixteen respondents who did not have a category to suit removed.

This procedure now permits comparison with Figures 16 and 17. The result is three almost identical graphs with a range of fifty six to sixty two percent of the respondents demonstrating negative responses toward night duty.

n = 238

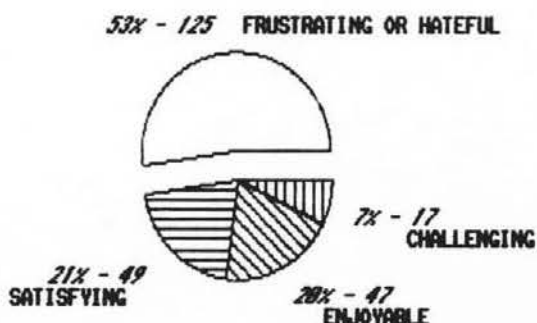


FIGURE 18: FEELINGS ABOUT NIGHT DUTY

Who prepares your duty roster?

The results shown in Figure 19 show that rosters are predominantly prepared by day administrative staff.

n = 254

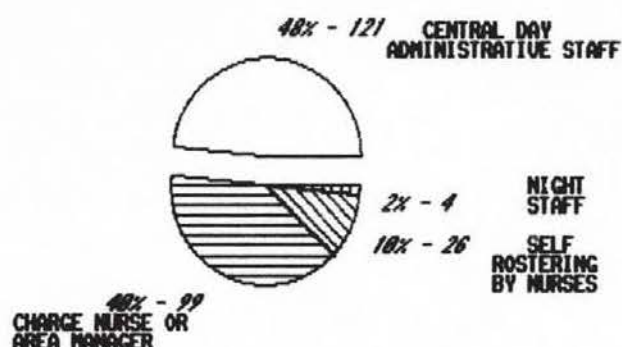


FIGURE 19: WHO PREPARES THE DUTY ROSTERS

Table 12 demonstrates hospital rostering patterns.

TABLE 12: ROSTER PREPARATION BY HOSPITAL.

ROSTER STAFF	HOSPITAL						TOTAL
	A	B	C	D	E	F	
Day central admin staff	33	66	12	3	1	6	121
Night admin staff	2	0	1	1	0	0	4
Charge Nurse or area manager	29	4	30	22	4	10	98
Self rostering	11	0	0	1	13	1	26
No answer	3	0	1	0	0	0	4
TOTAL	78	70	44	27	18	17	254

Sleep patterns when working at night

Figure 20 indicates that the majority of nurses have difficulty obtaining sufficient sleep. The categories of soundly and very soundly have been grouped together. Two nurses did not answer this question.

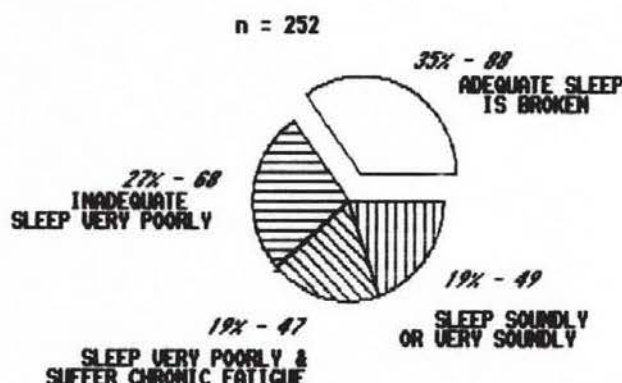


FIGURE 20: SLEEP PATTERNS WHEN WORKING AT NIGHT

Chronotype

Question 18 sought to establish chronotype personality. Figure 21 demonstrates chronotype groups under the headings of 'nightowl' and 'morning lark'. 76 (30%) had difficulty fitting into either category and 2 (1%) did not answer the question. Chronotype distribution is related to night duty in Table 10.

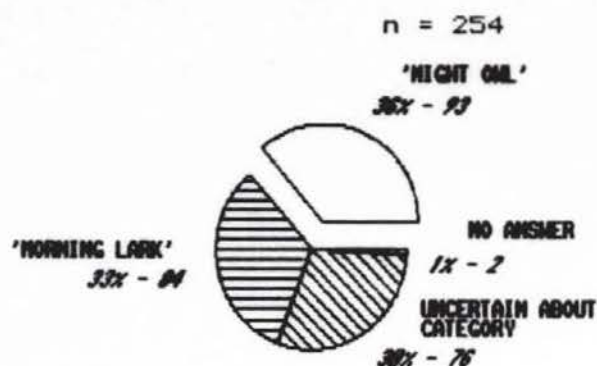


FIGURE 21: CHRONOTYPE

Night duty roster pattern

Nurses were asked in Question 19 to indicate the type of night duty or roster pattern that they felt they could adapt to best. The results are shown in Figure 22.

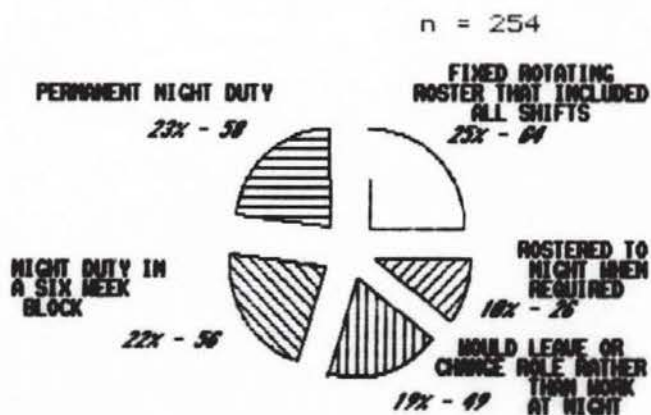


FIGURE 22 NIGHT DUTY ROSTER PATTERNS

Maximum period of night duty without stress

Table 13 shows in weeks the maximum period of time that the respondents felt that they could work night duty without feeling stressed.

TABLE 13 MAXIMUM PERIOD OF NIGHT DUTY WITHOUT STRESS

TIME IN WEEKS	NUMBER	PERCENTAGE
No answer	16	6%
Less than one week	53	21%
One week	24	10%
Two weeks	49	19%
Three weeks	5	2%
Four weeks	16	6%
Six weeks	16	6%
Eight weeks	9	4%
Twelve weeks	12	5%
Twenty four weeks	53	21%
TOTAL	254	100%

TABLE 14: COMPARISON OF ISSUES QUESTIONS 21 - 33

WORK PRACTICE OR ISSUE OF CONCERN	PARTICIPATING HOSPITALS										OVERALL n= 254			
	A		B		C		D		E		F		H SD	
	N	SD	N	SD	N	SD	N	SD	N	SD	N	SD		
PERSONAL AND EDUCATIONAL NEEDS	2.8	1.4	2.2	1.4	2.4	1.5	2.6	1.5	2.7	1.5	3.0	1.5	2.5	1.4
UNFAMILIAR WORK AREAS	3.0	1.4	3.0	1.5	2.4	1.5	3.3	1.3	4.0	1.4	2.7	1.4	3.0	1.4
DAY/NIGHT STAFF BARRIERS	2.9	1.3	2.5	1.3	2.5	2.5	2.4	1.4	2.5	1.5	2.6	1.5	2.5	1.3
STAFF LEVELS NOT WORK RELATED	3.5	1.4	2.9	1.5	2.6	1.5	2.9	1.4	2.4	1.5	2.3	1.4	2.9	1.4
INSUFFICIENT RESOURCE STAFF	3.4	1.5	2.6	1.4	2.4	1.3	2.8	1.5	2.0	1.4	1.8	0.8	2.6	1.4
UNABLE TO LEAVE WARD NEAL BREAKS	2.7	1.6	2.4	1.5	1.8	1.2	3.0	1.8	1.6	1.1	1.9	1.4	2.4	1.5
ONE PERSON LEFT ON WARD	3.0	1.5	2.6	1.5	2.6	1.3	3.2	1.7	1.8	1.4	2.1	1.2	2.6	1.5
NEALS NOT SAME AS FOR DAY	2.2	1.5	2.3	1.5	2.2	1.3	3.4	1.6	1.7	1.2	1.4	0.8	2.2	1.5
DRUG ADMINISTRATION AT 0600	2.6	1.5	2.6	2.3	2.0	1.2	3.3	1.6	2.7	1.6	2.0	1.3	2.6	1.5
UNABLE TO ATTEND LECTURES	2.8	1.5	2.3	1.4	2.6	1.5	2.4	1.4	2.4	1.5	1.9	1.0	2.3	1.3
LECTURE & MEETING TIMES	3.1	1.5	2.9	1.5	2.6	1.3	3.5	1.5	3.2	1.5	2.6	1.4	2.9	1.5
MANAGE AND MAKE DO WITH STAFF	3.4	1.5	2.9	1.5	2.6	1.3	3.4	1.4	2.4	1.5	2.4	1.4	2.9	1.5
ROSTER PREPARATION	2.5	1.5	2.5	1.5	2.5	1.4	3.2	1.6	1.9	1.2	2.3	1.2	2.5	1.5

Key: N = Mean or average

SD = Standard deviation either side
of the mean

OVERALL n = 254 Results calculated using all
of participants.

Rating:

Figures in the ranges of 1.0 - 2.9 and 4.0 - 5.9

indicate a degree of concern or stress.

Figures in the range of 3.0 - 3.9 indicate uncertainty.

The overall average indicates that some concern is

felt on all issues.

Questions 21 - 23 relate to thirteen issues about work organisation, work practices and work conditions, at night. The answers were rated on a five point Likert Scale. The results were sorted by hospital and the means and standard deviation calculated to provide Table 14. This table enables comparison of issues between the hospitals and the identification of the average degree of concern felt by the participants in this study. The overall column indicates results calculated using all 254 participants for comparison.

Rating:

1.0 to 1.9 = Minimal concern or distress

2.0 to 2.9 = Some concern or stress

3.0 to 3.9 = Uncertain if there is concern or stress

4.0 to 4.9 = Moderate concern or stress

5.0 to 5.9 = Great concern or very stressful

The ratings vary from hospital to hospital, however the table suggests that all issues are of concern to nurses working at night.

CHAPTER 6.

DISCUSSION

Response to study

Administrators and nurses expressed pleasure that night duty research was being undertaken, stating that it was long overdue. The study was favourably received by nurses in all participating hospitals. However, by comparison, Hospitals B and D had low return percentages.

The administrators in Hospitals B and D suggested that the lower response rate may have been related to a recent Public Inquiry and focus by the media. Comments made to the researcher and volunteers when in the work areas confirmed this view. Verbal and anecdotal comments suggested that a generally low morale may also have been a factor. There was no objection to the questionnaire or the research as such.

Some nurses from Hospital B wrote anecdotal notes expressing disappointment that their administrators had not taken action to improve concerns identified in the previous night duty research undertaken in their hospital (Brown, Brown & Peers, 1988). However, two respondents from Hospital F offered a contrasting view. They stated that additional part time night staff had been employed and meeting times changed. Inservice education was no longer an issue.

The response rate is presumed to be related to factors such as the size of the institution. Table 1 indicated that the larger the institution and the more staff available, the lower the percentage return rate.

This suggests that group and peer pressure may have a role in influencing interest and participation, in the smaller hospitals. Some nurses in Hospitals E and F commented that they were delighted to be invited to participate as they 'thought research was only undertaken in large hospitals,' Theatre staff in Hospital A expressed similar feelings, saying 'theatre staff are not often involved in general nursing research and they appreciated the opportunity to be included in this project.'

It is presumed that personal attitude to employment terms, working conditions, and the perceived value of the research to the individual are also factors affecting participation.

The respondents

Previous studies related to night duty and studied specific groups of nurses. The respondents in this study included all categories of nurses employed in managerial, clinical, educational and combinational roles in the Psychiatric or Public Health Services Hospitals. This combination offered a variety of attitudes toward work conditions and night

duty as management and award policies differed between the two divisions.

Gender

Gender distribution also differed from previous studies. One hundred and thirty two respondents were from the psychiatric sector, sixty eight males (51.5%) and sixty four females (48.5%). In the general hospitals, which is traditionally a more female domain of the one hundred and twenty two participants, only six (5%) were male, and the remaining 116 (95%) were female. The general hospital gender distribution is similar to the Australian gender percentage distribution of certified hospital nurses - 6.4% male and 93.6% female (Sinclair, 1988, p. 2). By comparison, the overall study gender distribution was 74 (29.1%) male and 180 (70.86%) female.

Dependents

Only forty seven percent (47%) of the nurses had dependents, which is a similar result to that obtained in the previous study (Brown et al 1988).

Employment terms

Differences in staffing employment patterns were observed in Table 4. The two general hospitals A and C employ staff full time, part time and on a casual basis in comparison to psychiatric sector - Hospitals B, D, E, and F. More full time staff may be required in Hospitals B and D to operate compulsory

fixed rotating roster patterns of two weeks morning shift, two weeks afternoon shift and two weeks night shift, four shifts on and two shifts off in a six week cycle.

Roster administrators at Hospital B indicated that at the time of the survey, staff numbers were being supplemented by agency nurses. No agency nurses participated in the survey at Hospital B. These nurses may have felt this research was of little interest, benefit or relevance to them, a factor which may have also contributed to the lower return rate from this hospital when compared with the 1988 study.

Nursing role

As may be expected, 192 (76%) of the nurses had clinical roles; 34 (13%) combination roles noted to predominantly management and clinical; 14 (6%) managerial and 4 (2%) in the educator role. Ten respondents did not wish to identify their role.

Table 11 suggests that individuals unable to cope with night work seek roles that excludes night duty. Eighty five respondents indicated that their role excluded night duty or they worked days but were on call at night. Eighty one of this combination group indicated that they did not see night duty as being preferable to day work. It may be possible to make the assumption that this is part of the cause of day/night communication barriers.

Nursing categories

194 (76%) of the nurses were registered, 45 (18%) were enrolled nurses, 13 (5%) were general enrolled nurse students, and one nursing assistant participated. No attempt was made to determine the number of registered nurses who had worked night duty during the past three months, but it is known that night staff are predominantly registered nurses and in the age groups with dependents (Coughlin-West, 1983).

Age groups.

The 30 - 39 year age group was the most dominant. It was interesting that this age group had difficulty interpreting questions 21 to 33 where a Likert Scale was used. This was demonstrated by evidence of several attempts to answer, and by anecdotal notes in the margins, often pertaining to information or queries not related to the question.

Age has previously been identified as being related to the ability to cope with night work, with research showing that individuals over forty years of age are more likely to experience chronic fatigue as a result of broken sleep (Minors et al 1985, p. 27). This information is relevant if hospital policies are identified as being a major reason why nurses prefer not to work at night because of the difference in industrial awards and rostering patterns between the two sectors. A comparison of age group

distribution of staff in the general and psychiatric hospitals was made in Figures 13 and 14. These demonstrated similarity in age group distribution. However, in the Psychiatric sector there are less in the 40-50 years group and more in the <30 years groups than in the General sector.

In Table 10, age groups were correlated against the question - 'is night duty preferable to day duty.' Although the groups were not separated in the analysis, a higher proportion in the 40-49 year old age group indicated that 'night was not preferable to day duty' when compared visually with the other groups. Further analysis of the age relationships to would be necessary to confirm if night nurses cope better if aged less than forty years.

Nursing education and country of registration.

Figures 10 and 11 indicate that 89% of the nurses were educated in hospital based Schools of nursing and 96% of the respondents gained their nursing registration in countries using the 'British system,' These questions relate to cultural bias as they suggest that night nursing would have been included as part of student clinical experience. It is also suggested that work practices and conditions apparent in the United Kingdom and British Commonwealth countries are likely to be seen as norms, being no different to previous and student work experience. Combined with the service orientation of the nursing

profession, these factors may have contributed to negative attitudes and management apathy toward the concerns of night nurses (Reverby, 1987; Sinclair, 1988).

The two tertiary trained nurses indicated that they had not experienced night duty, but were aware of the physiological effects of working at night.

Question 7 identified the country where the nurses first obtained registration. Participants in the student category were uncertain how to answer this question as they are not yet registered, suggesting that the question would benefit from being rephrased to 'In which country did you or will you register initially as a nurse?' Nurses who indicated they were students were placed in the Australian category.

Work groups

Table 8 showed the distribution of the respondents in to work groups and demonstrated the difference in night staffing policies between the hospitals surveyed.

Hospital A employs permanent night staff and a number of nurses expressed concern that the study might change this policy. Most appreciated not being rostered to night duty. In contrast, the remaining hospitals either rostered staff to night duty as required or used compulsory rotating roster patterns.

Table 11 confirms previous studies (Hockey, 1976; Coughlin-West 1983; Fiedor & Keys, 1987) that indicated that there are a group of nurses who work night permanently. When relating the numbers of permanent night staff to questions related to attitude toward night duty, there was a significant correlation which suggests that this group had more positive attitudes. Eight percent of the permanent night staff indicated that night work was preferable to day work. From these figures it may be presumed that the remaining twenty percent worked night for reasons other than personal choice. Comparison with Table 9 suggests that tertiary lectures, only employment available and financial gain could account for 17% of this figure.

Reasons nurses work night duty

Table 9 confirmed that hospital policy is the main reason that nurses work night duty. This situation is understandable from the organisation's point of view as staff are required for twenty four hours of the day.

Seven percent indicated that they worked nights to enable attendance at tertiary lectures. Flynn (1983) expressed concern at the combination of night nurses and study, and also at night duty being offered as 'the only employment available.' Seven percent fitted the only employment category.

Twenty three percent found that night work suited personal and family circumstances.

Coughlin-West (1983) noted that many nurses with young families use part time night duty as a means of financial support and keeping up with nursing skills.

A small percentage considered financial reasons to be the most important reason to work night duty. Judging by anecdotal comments and the Brown et al (1988) study, this would depend on the day of the week worked and the Hospital sector. The Psychiatric award differs in that there is a flat rate for shift work, where as in the General Hospitals increased rates are received for Friday and Saturday night work. This situation in fact creates a problems for nurse administrators as there are always volunteers for Friday and Saturday nights but not for the less financially rewarding nights of the week. Nurses in hospitals B and F indicated that they perceived that they were not financially rewarded for night work (Brown et al 1988 and anecdotal notes in this study). Three nurses indicated that under no circumstances would they be prepared to work night duty - they would leave.

Factors influencing attitude toward night duty

These are demonstrated in Figure 15 and answer the research question. Nurses have confirmed that night work affects their personal and social

life, body rhythms, and causes chronic fatigue. Forty four percent indicated circadian rhythms and chronic fatigue were the major factors influencing their attitude toward night duty, and 22% the effect on personal and social life. Answers related to non chronobiological factors made up a total of 29% consisting of - 13%; Roster patterns - 9%; organisational policies 7% made a total of 29% for factors related to non chronobiological factors.

The similarity of the three graphs for figures 17, 18 and 19 confirms the disruptive effects of night duty and the negative attitudes created.

These findings are significant because they (a) confirm suggestions that not everybody can adjust to night duty or night shift work, a factor which needs to be considered when selecting nursing staff (Flynn, 1983; Rose, 1984; Minors et al, 1986).

(b) suggest a relationship between attitudes toward night duty and the ability to cope with working at night.

Is night duty preferable to day

For 62% of the respondents, the answer was "no," night work was not preferable to day duty. 22% preferred night duty and 15% indicated that there was no difference. The only significant correlation when this question was used to test attitude toward night duty was the work group. This confirms that nurses best able to cope with and adapt

to night duty are those nurses who choose night duty above all other shifts (Coughlin-West, 1983; Fiedor & Keys, 1987).

Feelings about night duty

This question was included to confirm the findings of the previous question. Results again indicated that the majority did not enjoy night duty. 125 (53%) described night duty as frustrating or hateful; 49 (21%) as satisfying; 47 (20%) as enjoyable and 17 (7%) as challenging. It must be appreciated that feelings about night duty are not all negative and there are some advantages such as increased autonomy, and time during the day for other activities Coughlin-West 1983; Brown et al 1988).

Roster preparation

Question 16 identified where rosters are prepared in the participating hospitals, in an attempt to ascertain if nurses who may actually work at night are involved. The results in Figure 20 and Table 3 suggest that nurses' concerns 'that nurses preparing the rosters seem to have forgotten what it is like to work at night' may be true. It is not to suggest that nurses may not have some input. However, only four (2%) indicated that night administrative staff prepared the rosters, and twenty six (10%) that self rostering was practiced. It is equally possible that those practising self rostering may not be nurses who work at night. Hospital E practises self rostering

with rosters 'tailor made to suit the staff'.

Sleep

Question 17 asked staff to identify their sleep patterns. Only 13% indicated that they received sound or very sound sleep, 35% adequate but broken sleep, 27% inadequate and very poor sleep. 19 % suffered chronic fatigue when working night duty. From these percentages it is easy to understand why illness and absenteeism occurs. Nurses in Brown et al (1988) study indicated that the Western Australian summers compounded the problem of sleeping during the day. This factor combined with increased sensitivity to noise and insufficient time to recover between shift changes led to chronic fatigue. Coughlin-West, 1983 and Cameron-Hill 1987 have both suggested that consideration should again be given for the provision of sleeping accomodation at or close to the hospital. This could assist nurses required to attend meetings during the day and those too tired to drive home safely, or who have difficulties with public transport.

Chronotype

Twenty nine percent of the nurses had difficulty categorising their chronotype, suggesting additional categories or further explanation may be necessary. However, a number of nurses indicated that they had not experienced night work and this may have contributed to the difficulty in answering this

question. No attempt was made to relate chronotype to age or sleep pattern as it was felt that insufficient information was contributed.

Maximum period of night duty without stress

Table 13 clearly indicates that a number of nurses find it very difficult to adapt to night work.

This table has confirmed that the majority of shift workers cope best with night duty for a period of one week or less and to a maximum of two weeks.

Those capable of coping with twelve weeks or more are presumed to be able to cope with permanent night work.

Some permanent night staff indicated that they felt an indefinite category should be included. Others indicated that they did not answer this question because they had insufficient night duty experience. The two tertiary trained staff had not experienced night duty.

Roster patterns

Nurses were asked in Question 19 to indicate the type of night duty or roster pattern that they felt they could adapt to best. 58 (23%) indicated that they preferred to work night permanently; 64 (25%) are happy with rotating shifts; 56 (22%) felt that they might adapt better to night in a block of six weeks; 26 (10%) had no objection to being rostered as required and 49 (19%) indicated that they would rather change their role or leave if required to

work at night. The latter group adapt as suggested in the conceptual framework . Nurses that recognise that they are unable to physiologically cope with night duty alter their work role or leave the organisation.

The results suggest that there is room for more rostering flexibility and self rostering. This would permit combinations of blocks, rotating rosters, permanent night duty and rostering as required.

These findings certainly suggest that much more thought needs to be given to roster preparation to reduce the chronobiological effects of night duty and the Babington roster would be well worth a trial in the hospitals using compulsory rotation roster patterns.

Work practices and concerns

Table fourteen permitted comparison between hospitals and this comparison was felt to be necessary because of the difference in policies between the two hospital sectors. All of these issues are worthy of consideration with a view to improving these situations, most of which have medico-legal ramifications for nurses and patients.

The computer statistic printouts have been produced in Appendix E as these show the ranges more clearly for each question and the numbers that answered.

Further correlational analysis would be of interest to see if managerial and clinical staff saw the issues the same way. The fact that this study used a population that included all nurses may in fact have 'clouded the answers' in this section of the instrument.

Anecdotal comments.

A selection of the comments that numerous respondents voluntarily contributed are provided in Appendix F for any reader who may find them of interest. For many the words 'night duty' created negative thoughts. However the efforts of these writers is appreciated. Although the personal opinions of the writers, they indicate and confirm situations described in previous anecdotal journal articles and provide background information related to questions 21 - 33.

The 254 participants in this study have confirmed that, for the majority, night duty creates negative responses, predominantly generated by the chronobiological effects of maladjusted circadian rhythms. In turn, personal and social life is affected. Factors affecting attitudes toward night duty originate from past and current experience, which affect the individual's feelings and motivation to work at night. Attitudes, motives and behaviour have been demonstrated to be interrelated (Keane, 1981, p. 91).

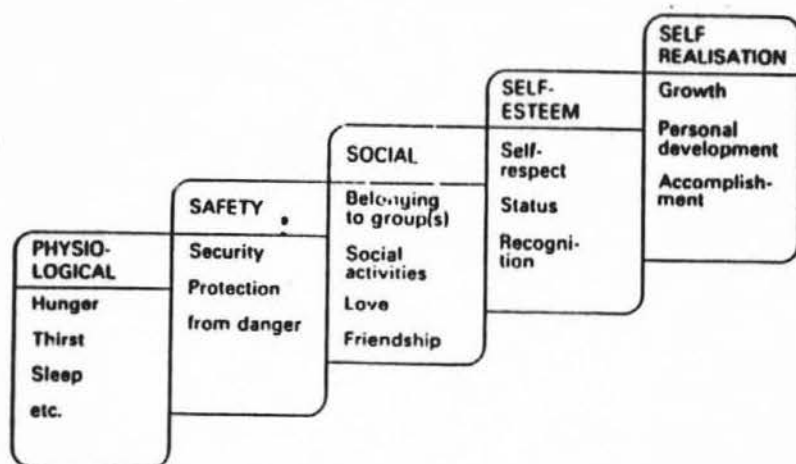


FIGURE 23: MAN'S BASIC NEEDS

(Rowden, 1984, p. 16)

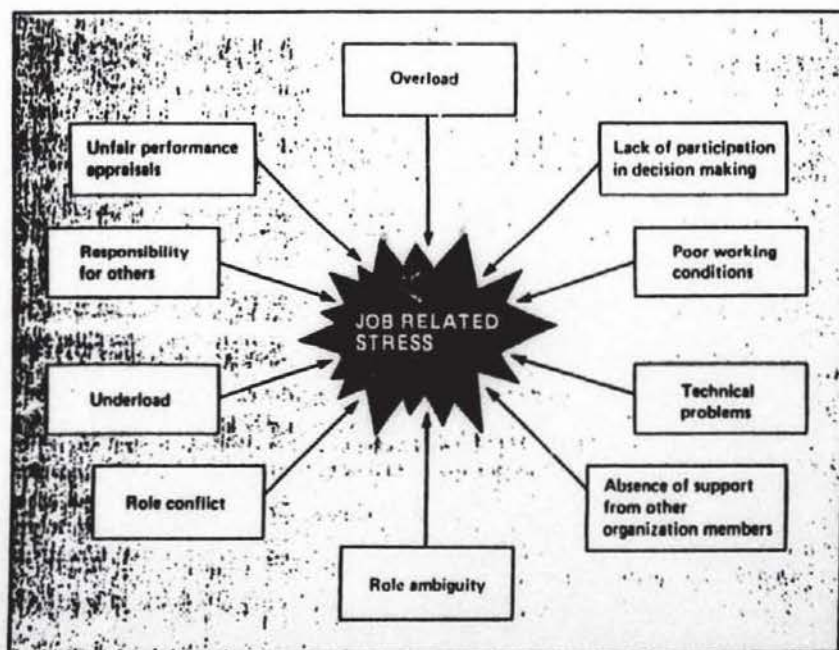


FIGURE 24: ORGANIZATIONAL CAUSES OF STRESS

(Baron, 1986, p. 215)

The combination of personal needs not being met and stressful environmental conditions (Figures 23 and 24) lead to a lack of motivation to perform, loss of productivity, absenteeism and attrition. (Keane, 1981, p. 91).

This study has confirmed that some nurses will leave rather than work at night and that others seek hours of work and roles to avoid the shift. Baron (1986, p. 215), identified work overload, the need to take responsibility for others, lack of participation in decision making, absence of support from other organization members and poor working conditions as being major sources of work stress (Figure 25).

Both the personal and organisational effects of night duty on the nurse as an individual have been identified in this study. The anecdotal notes have provided examples of the extenuating circumstances, issues and concerns, voiced by nurses working in a variety of categories and roles. Some night nurses felt that nurse administrators were disinterested and uncaring about problems that night nurses face. Conversely some administrators consider this to be 'poor attitude and little can be done to change these attitudes' (Keane, 1981, p. 91). Therefore, Chapter 7 will discuss the background to many of these situations, identify the implications for management and discuss the need for further research.

CHAPTER 7

ISSUES, CONCERNS AND RECOMMENDATIONS.

In this chapter it is proposed to review and discuss the issues underlying questions 21 - 33. These questions related to the 'worst aspects of night duty' as described by nurses in the studies of Coughlin-West (1983) and Brown et al (1988). They are similar to situations described in the N.H.S. Report (1987) which investigated night nursing services in the United Kingdom. Recommendations were made that night nurses' personal needs, work practices and work conditions should be reviewed by nursing and hospital administrators.

The historical perspective

Readers who have considered the anecdotal comments, the review of the research available (Appendix A and B) and the instrument may at this point in time have mixed feelings. One's initial reaction after reading the results and the anecdotal comments contributed by respondents is to ask - 'Why do some of these situations exist?' and 'Why have nurses not complained sufficiently loudly about them in the past.'

Nurses and nurse administrators have expressed their concerns about staffing levels and working conditions that increase workload and

jeopardise standards of patient care. However, it appears that current hospital organisational practices do not take the needs of nurses into consideration, because of an inherent lack of funding, and the increasing pressures of work load on the public hospital system. As a result, nurses and patients are exposed to the occupational hazards of shift work related to chronic fatigue (Sinclair, 1988, p. 3).

Although mentioned briefly in the literature review, it is perhaps appropriate to consider some historical aspects of nursing which answer the first question. Reverby (1987, p. 6) has suggested that Florence Nightingale's influence and legacy has created a dilemma for nurses and perpetuated the situations identified in this study. Nursing was seen as an art and women did not need to be trained; character development meant that strict adherence to orders passed from the medical profession and through the nursing profession had to be accepted and not questioned. Character was 'tempered by the fires of training.' Caring was not seen to be an important attribute and nurses, although caring to their patients have been demonstrated to be not caring to themselves and their colleagues (Davis, 1984; Reverby, 1987).

It appears that employers focusing on the objectives of providing twenty four hour staff cover

of the management practices on night staff and night nursing services. Cultural bias and poor day/night staff communication appears to have perpetuated many of the situations.

Nursing and medicine are service orientated professions and hospitals have been predominantly administered by members of the medical profession. This appears to have perpetuated the non questioning of work conditions and the acceptance of exceptional working hours by both medical and nursing staff (Sinclair, 1988, p. 3).

A Health System in crisis at night?

A recent television documentary (Hinch, 1989) which portrayed nurses working at night in a neonatal intensive care unit asked, 'Why do they do it - its a Health System in crisis.' This programme highlighted problems related to inadequate staff levels, lack of equipment, meal breaks and resource personnel at night. The life threatening situations created by nurses carrying the additional workloads of absent colleagues, and the difficulties of trying to make do with Agency or other staff unfamiliar with the unit, were graphically portrayed.

The expectations of the public versus the provisions of staff and equipment governed by state and federal politicians were identified as areas worthy of concern.

The availability of Agency Nursing Staff

One only has to ask, "Why are nurses available to work at night through Agency services but not so forthcoming through the hospital system?" Why do Agency staff choose to work in hospitals from which they have resigned? Agency nurses work the hours and in the organisations that they choose, and their contribution is financially recognised. These nurses, although having to cope with working in unfamiliar areas, are not subject to traditional organisational policies and management practices. They are also welcomed by colleagues who need their assistance at short notice (Agency Nurse, personal communication, November, 1989).

However, as previously mentioned, the presence of Agency Staff can increase stresses for nursing colleagues. These problems could be overcome if the Agency Employers and the employing hospitals made facilities available for the orientation of these nurses to equipment and intravenous fluid administration policies.

Nursing staff levels and patient safety

American Nurse administrators and British studies have highlighted problems related to unrealistic budgetary restrictions and funding for staff (Di Vinceti, 1972; Royal College of Nursing Reports 1958 & 1978; N.H.S. Report, 1987).

It appears that nurses have little input or control over the admission of 'booked cases' so that staffing levels can be provided appropriate to the work load. This situation greatly affects the safety and quality of patient care at night (Scott, 1988). Western Australian staffing shortages have been highlighted recently (Bell, 1989; O'Leary, 1989) and they reflect world trends in being unrelated to patient needs (ANF Newsletter August, 1989, p. 1).

Comments by participants in this study and that of Brown et al (1988) have drawn attention to the situation of 'only one person being left on the ward to enable meal breaks to be taken, and the fact that this person may be an enrolled nurse.' The recommended minimum number of nurses at night is two, one of whom should be a registered nurse (N.H.S. Report, 1987, p. 99).

Although this is basically a manpower allocation problem, nurses as professionals are also accountable and responsible to ensure staffing levels are adequate to ensure safe practice. It appears that registered nurses may need a timely reminder of their responsibilities to meet these obligations. Of particular concern are two comments that indicated 'no staff were in the ward area' on occasions.

Quality of nursing care at night

The question needs to be asked, "How is the quality of nursing care at assessed at night and by whom?" (Cameron-Hill, personal communication, September 15, 1989; Spry, personal communication, September 25, 1989; N.H.S. Report, 1987, p. 98).

Rutkowski (1987, p. 189) discussing nurse managerial education, asked if nurse managers had the skills to monitor staff and security concerns which included environmental safety and infection control, particularly at night. The lack of medical, paramedical and nursing resource and education staff deemed necessary during the day has been confirmed as a source of stress to night staff in this study.

The night manager role

These comments raise the question of the role of the night manager. Flynn (1983), suggests that many of the night staffing problems could be overcome if Night Supervisory staff were involved in the selection and rostering of staff who work at night. The motivation to work at night, and suitability of staff could then be considered and appropriate orientation, flexible rostering, and on going education provided.

Night nurse employment practices

The practice of employing night staff with the promise of being moved to day shift when positions become available has been criticised by Jacobsen & Mc Grath (1983, p. 188). They see selective hiring of night staff as being essential and that if no other positions are available managers ' must be honest about the time period a nurse would have to work night duty.' As it has been demonstrated that nurses who choose to work night permanently adapt and cope better (Coughlin-West, 1983; Fiedor & Keys, 1987), it also seem appropriate to consider measures to attract nurses to this shift. Permanent night nurses tend to be in the age group with young children and family commitments (Coughlin-West, 1983).

Night nurse selection criteria

Night nurses have been seen as a specialist group by Coughlin-West (1983) and Cameron-Hill (1986) with additional needs and skills. It has been suggested that staff selected to work at night should have:

- * a high level of competence, and be able to cope with any situation unsupervised
- * be confident, effective communicators
- * have an ability to work well in small groups
- * be healthy and be aware of the effects of night duty on their physical, emotional and personal well being

- * not be carrying additional study work loads that require attendance at lectures during sleep time
- * have medical clearance if known to be a diabetic, asthmatic, or epileptic.
- * be aware that any medications may have increased action if taken around four in the morning
- * preferably be under the age of forty years because of the reduction in quality of sleep associated with ageing.

(Hoskins 1981; Flynn 1983; Coughlin-West 1983; Alward, 1988).

Meals and meal breaks

Nursing is both physically and mentally demanding. Nurses average less sleep than other shift workers by comparison, so it is not surprising that the combination of family and study commitments and maladjusted circadian rhythms rapidly leads to chronic fatigue, negative attitudes and absenteeism. It is surprising therefore, that some hospitals do not provide suitable meals at night. This situation is thought to be related to memory lapses and increased fatigue around four in the morning (Sinclair, 1988).

Night nurses' basic needs

There is ample evidence from this study to indicate that night nurses' basic needs are not currently being considered. These needs have been

previously mentioned in the conceptual framework and are demonstrated in Figure 24, page 82.

Research recommendations have been made that the professional, educational, security, personal needs of night staff and night staffing levels should be reviewed (Coughlin-West 1983; Flynn, 1983; Kemp, 1984; Rose, 1984; Fiedor & Keys, 1987; Sinclair, 1988)

Night nurse education

Coughlin-West (1983), Cameron-Hill (1988) and the N.H.S. (1987) study have recognised night nurses as lacking in staff development, educational programmes, and support systems to encourage personal and group stress management. As a consequence night nurses lack opportunities for personal growth, accomplishment, status, recognition and self esteem.

Coughlin-West (1983, p. 156) has identified a need for the two separate educational programmes. which were tested in a pilot study as follows:

- '1. Basic preparation for night work with emphasis on the learning needs of adults, effective communication skills and leadership
2. Continuing education and the professional development of nurses on night duty, with outreach facilities.'

Coughlin-West detailed and tested a night education programme which resulted in improved motivation, job satisfaction, and professional maturity, growth, and development in many cases for many participants. It was found that collective welfare resulted and individual well being increased' Coughlin-West (1983, p. 163).

There are a variety of ways that on going night nurse education can be undertaken. These include surveying the nurses to identify specific needs and then structuring self learning packages using videos and selected references (Dupje, 1987, p. 154).

Designing a staff development programme which includes information necessary to attain identified standards of care established within the hospital. This would include regular revision of procedures related to emergencies such as fire, earthquake, cardiac arrest. Intravenous certification and infection control information should also be included. Two options exist: the provision of nurse educators who work at night, or the provision of relief staff to enable night staff to attend block courses during the day. The block system is particularly beneficial as more day resource staff can be involved. This in turn fosters day/night staff relationships. Tertiary institutes do provide subjects that can be studied extramurally. This option reduces the need for night staff to attend lectures during sleep time.

Managerial training

The N.H.S. Report (1987) recommended managerial training for management and clinical nurses, noting that these skills were especially relevant to night staff who have minimal medical, paramedical and nursing resource staff available.

Consequently, it may be an appropriate time to develop a unit within the Nursing Degree Programme which expands on behavioural and communication skills, group processes and time and stress management. Interviewing, staff selection, budgeting, rostering counselling skills, and the special needs of shift workers are concepts which need to be included.

Night nurse discrimination - study leave and taxation

Study leave provisions in Western Australia do not take night nurses into consideration (Attrill, 1989, p. 2). This group is also discriminated against in tax legislation. Travelling expenses to lectures and meetings attended by night nurses in their sleep time cannot be claimed, as the nurses' travelling starting point is from home, not work. Day staff who attend the same meetings, travelling from and to their work place can claim these costs (Taxation Dept. personal communication, September 1st, 1989).

Night duty coping mechanisms

The need for coping skills for night staff has been recognised. Articles related to coping with night work have been identified (Collison, 1984, p. 14; Moore 1984, p. 47; Fiedor, 1987, p. 116; Janowski, 1988, p. 1340; Fiedor & Keys, 1987, p. 1168) Much of the appropriate advice has been included in Appendix A with the description of Fiedor & Keys (1987) research.

Hoskins (1981) suggested that the first indicators of nurses not coping with job demands and shift work are increased absences, and incidence of cold and influenza type illnesses. If not recognised, errors of judgement and accidents occur.

Nurses need to balance their personal needs with the needs of the employer organization and understand the effects of shift work on their lives. They also need to be aware that there are alternatives to negative attitudes and absenteeism which include appropriate communication, group problem solving, coping strategies, and stress management (Cameron-Hill, 1986; Fiedor & Keys, 1987).

Night nurse seminars

Seminars, specifically designed for night nurses, are available through 'Creative Management.' Patricia Cameron-Hill has been a 'voice for Australian night nurses' (Glencross, 1986, p. 6).

With Shayne Yates, she recognized night nurses as a specialist group, organised seminars specifically for night staff, and compiled a book of 'ideas for night nurses.' This book includes ideas contributed by nurses who have attended Creative Management seminars throughout Australia (Cameron-Hill, 1986, p. 7; & 1988).

In a recent personal conversation, Patricia Cameron-Hill expressed concern that in general administrative staff seemed apathetic about night nurses' problems and that the majority of nurses who have attended 'night nurse seminars' had been day staff (Cameron-Hill, Personal communication, 28th September, 1989).

Night nurse attendance at lectures

Night nurses to whom the author has spoken have indicated that their concerns have not been accepted or heard by administrators and often they can not be released to attend study days, seminars or meetings, many of which are scheduled in their sleep time. Sadler (1988, p. 18) has confirmed this statement describing night nurses 'as being out of sight of administrators.' It has been suggested that this situation contributes to negative attitudes, feelings of low esteem through lack of recognition of their contribution, and powerlessness to effect change (Jacobson & McGrath, 1983, p 137).

Contrasting views however, have been provided by a nurse educator, who has arranged lectures specifically for night staff. Nurses have not participated despite being paid to attend (Matthews, personal communication, November 8th, 1989).

Performance assessment and the Nursing Process

Bell (1987, p. 34) and Karl (1986, p. 66) have considered the importance of night staff performance assessment and the need for a co-ordinator for night staff education. Moheepeth (1984, p. 38) expressed concern that night staff participation in the preparation of nursing care plans was minimal.

Although nurses blamed staff and time shortages, Moheepeth saw insufficient encouragement, and the lack of staff appraisal and educational programmes as the major causes of lack of participation. These views were confirmed by nurses in Brown et al (1988) survey and in anecdotal notes in this study. Night nurses have said that they had the time to view patient's records and had much to contribute, but resource staff were not available and day staff did not always appreciate their contributions. Night staff also felt that day staff often withheld appropriate information from the night staff.

The fostering of day/night staff relationships

There are a variety of ways that day night staff relationships can be fostered. Some suggestions include the use of rotating shifts, newsletters and invitations to social functions. Certainly if rotating rosters are considered, the previously described Babington roster is recommended. Night management staff, currently expected to attend lectures during the day do have a problem contributing constructively, attending meetings and obtaining adequate sleep. It has been suggested that day managers, clinical nurse specialists, and educators should rotate on to night to view problems at first hand, improve communications, and undertake staff assessment (Holdt, 1983). This situation would certainly assist in the recognition of the unrealistic expectations of using pool nurses, agency staff and nurses moved at short notice to unfamiliar areas to fill staffing gaps at night (Rutkowski, 1988, p. 64). In turn, perhaps night management staff could rotate to a day shift at intervals and participate in staff selection.

Early morning stress

This research has confirmed that nurses are severely affected by the chronobiological effects of working at night, exacerbated by work practices, work conditions and organisational policies. The use of 'twilight shifts' and the reviewing of drug administration times, combined with additional short

early morning shifts are recommended to reduce accidents related to fatigue and memory lapses in the early hours of the morning (N.H.S. Report, 1987; Della, 1989).

The British report also highlighted the lack of equipment and linen at night that necessitated staff borrowing from other wards. As a consequence, nurses unnecessarily left their ward areas to borrow equipment. Alternatively, night management staff were found to be running errands to obtain equipment.

Implications for Hospital and Nursing Management

It is recommended that nursing and hospital administrators consider taking the appropriate steps to:-

1. Establish night Quality Assurance programmes to enable the assessment of:
 - * staff and patient safety
 - * Examine the quality of patient care at night.
2. Make recommendations for appropriate staffing levels to ensure that night staff have meal breaks.
3. Review the availability and quality of meals available to night nursing staff (Some hospitals provide meals for Doctors but not nurses).
4. Recognise night staff as a specialist group with special needs. That given the opportunity this group could assist in solving many of their problems (Coughlin-West, 1983; Cameron-Hill, 1986).

5. Review night staff selection policies (Flynn, 1983; Coughlin-West, 1983).
6. Initiate appropriate orientation and on going education for night staff (Coughlin-West, 1983; Cameron-Hill, 1986; Dupje, 1987).
7. Examine problems related to the lack of resource staff both nursing, medical and paramedical (Sinclair, 1988; Brown et al, 1988).
8. Remind nurses of their obligations to ensure that sufficient staff is available to cope with any emergency that might occur (British N.H.S. Report, 1987).
9. Review the Night Nurse Management role - can one person really cope with all the employer expectations? (Piesse, 1986; Sinclair, 1988; Williamson et al, 1988). This may mean reviewing means of having other resource personnel available to assist and supervise within the work area i.e. staff development and Clinical Nurse Specialist personnel.
10. Consider alternative rostering policies, with the emphasis on decentralisation, and the reduction of fatigue due to the effects of maladjusted circadian rhythms (Rose, 1984; Taffa 1984; Sinclair, 1988)

11. Where possible have experienced permanent night staff, complemented when necessary by staff rotating to night using the Babington roster.
12. Consider making sleeping accommodation available to
 - * staff required to attend day time meetings
 - * staff required to work at night that have long distances to drive or rely on public transport.
13. Consider the provision of child care facilities to enable solo parent nurses to work at night, or night nurses with young children to obtain adequate sleep during the day (Coughlin-West 1983, p. 158). This measure could increase the number of staff available to work permanently at night.
14. Recognise that under Occupational Health and Safety regulations nurses have a right to expect a safe work place and to be concerned about the work load and the quality of care that they are able to give (Beaumont, 1989, p. 10).

Limitations of this study and research recommendations

This study had been limited in that the findings are related to specific hospital establishments. Consequently the results cannot be considered as being representative of nurses and Australian hospitals in general. However, there are

similarities within the psychiatric and general hospital divisions.

Sufficient evidence has been obtained to establish that the concerns and issues previously described as 'the worst aspects of night duty' are worthy of concern and consideration by nursing and hospital management. It appears, however, that a number of nurses who participated in this study lacked experience in night work. This factor combined with the inclusion of nurses of all categories and roles may have clouded the results to the questions related to issues and concerns.

The conceptual framework has been considered and non statistical relationships identified between all listed components in Figure 8. It appears that this framework could be used to indentify variables for causal analysis.

The study failed to confirm relationships between chronotype and attitude toward night duty due to respondents being unable to fit in to the chronotype categories offered in the questionnaire.

Further research is indicated to determine nurses best suited to night work and the maximum period of night duty that permits safe, quality patient care (Kemp, 1984, p. 222; Linder-peltz, 1986, p. 42; Fiedor & keys, 1987, p. 1168; Williamson et al, 1988, p. 162; Alward, 1988, p. 1336, Brown, 1989).

Although a great deal is now known about maladapted circadian rhythms and their effects on nurses, the effect of compromised workers on the quality of patient care has not been identified. (Linder-Peltz 1985, p. 15 & 1986, p. 43).

Longitudinal studies are recommended to establish the point at which maladjusted nurse shift workers compromise patient care and become costly to the organisation in terms of absenteeism, sick leave, attrition and workers compensation claims (Williamson et al 1988, p. 162)

Recommendations to the Health Department of Western Australia.

The similarities within the psychiatric and general hospital divisions, and with the findings of the N.H.S Report (1987) suggests that the British report could be used as a model for further research to:

1. Establish the quality of nursing services at night in Western Australia.
2. Review staffing levels and establish the costs of rectifying the concerns and issues raised to ensure safe quality nursing care.
3. Review the professional, educational, security, and personal needs of night staff.
4. Investigate occupational, health and safety hazards of night duty.

This research could include such topics as

- * Temperature control, adequate heating,
- * noise levels for nurse and patient
- * Security: car parks, security staff at night
- * Review of night accident statistics
- * The availability of lifting equipment and 'lifting personnel.'
- * Reasons for absenteeism from night work.

Significance of this study

This study has identified a wide range of circumstances and issues, many with medico legal implications and ramifications, that play a part in influencing nurses attitudes toward night duty. It is hoped that this discussion will have contributed to a better understanding of the needs and problems of night nurses.

The study has established that nurses' attitudes toward night duty are primarily influenced by circadian and chronobiological factors. Not all nurses are able to cope with shift work and night duty. Current economic pressures require many nurses to endeavour to cope with shift work, night duty, study and young families. It appears that most nurses can work night duty for less than two weeks without feeling stressed. Current management practices and rostering policies do not take these factors into account.

Nurses cannot be compared with other shift workers. Recent suggestions by the State Government that the length of annual leave should be related to all nurses working a period of night duty is dangerous. This study has demonstrated that nurses are concerned about the medicolegal implications of inadequate staff levels, and the lack of resource staff at night. Twenty three percent of the respondents indicated that they would choose to work permanent night duty. In contrast, nineteen percent indicated that they were unable to adapt to night duty and would leave if they were required to work night duty.

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APPENDIX A

Review of research related to night duty

Nursing Journals have been used to obtain voluntary populations to question nurses on their preferred hours of work and night work conditions (Kemp, 1984, p.217; Barnes, 1980, p. 22). Ford (later Fitzpatrick 1977) surveyed 1175 self selected Canadian nurses and noted that nurses who rotated to night duty felt below par during and after the week's period of night shift (Kemp, 1984, p. 218). These findings were confirmed by Tasto & Colligan (Stamps & Piedmonte, 1986, p. 11) who found night shift rotators experienced more sleeping problems, eating disturbances, somatic complaints, psychological disturbances, absenteeism, marital disharmony, and lower job satisfaction than permanent night nurses. However, the longer period of time a night nurse worked, the more likely she was to become satisfied with her work.

Folkhard, Monk & Lobban (1978, p. 785), demonstrated that permanent night staff showed some physiological adjustment from the second night of a block of night shift, considered to be related to these nurses scheduling their lives around their work.

British nurse researchers, Armstrong-Esther (1978, p. 74), found work performance improved after the first night of duty, but body temperature had not adjusted after seven nights.

Slow weekly rotating shifts were condemned by Akerstedt & Torsvall (1978, p. 850) and Folkhard & Monk (in Reinberg, Vienz & Andlauer 1981).

These researchers described female shift workers as being severely disadvantaged as not all could adjust to the demands of work and home roles.

New Zealand nurses identified the best and worst aspects of night duty and led Barnes (1980, p. 22) to describe night duty as 'living upside down.' Coughlin-West (1983) and Brown et al (1988) later used similar questions, and obtained similar responses from Australian nurses who described the effect of night duty on themselves and their families.

Jenkinson (1981, p. xxiv) found that student nurses rotating to night duty experienced more headaches, nausea, increased smoking, eating and drinking, and fatigue than permanent night nurses.

Akerstedt (1981, p. 265) confirmed that above the age of forty-five years night shift workers experienced a decrease in sleep length with increased experience of night work. This suggested increased night adaptation problems were related to age, circadian physiology and the speed of recuperation.

In 1981, Reinberg et al challenged the assumptions that 'any person at any time could work shift work' and 'anybody could work shiftwork' and found them to be dangerous illusions (Kemp, 1984).

Folkhard, Knauth & Monk, (1976); Folkhard, Monk & Lobban (1978, p. 785), Folkhard & Monk, (1981) in Reinberg et al (1981), and Folkhard, Condon and Herbert (1985, p. 510) demonstrated that shift workers and nurses in particular have memory impairment and reduced response times as a result of desynchronisation of circadian rhythms associated with chronic fatigue. These findings have medico-legal ramifications for nurses and hospital administrators (Williams, 1989, p. 95).

Coughlin-West (1983) concerned at the lack of knowledge of the adaptive process for nurses required to work at night investigated the 'Quality of working life of the night nurse' by surveying one-hundred and sixty-one night nurses in six Canberra hospitals. Results indicated that nurses who chose to work night permanently had more positive motivation to work at night and gained greater job satisfaction than those required to work both day and night shifts as rostered. Coughlin-West identified that night nurses work as a co-hesive group, that communication between day and night staff was poor, and explored the stereotyped image of the 'night nurse.' Some characteristics of permanent night nurses were identified. Like Hockey (1976, p. 101), Coughlin-West (1983, p. 142) noted the dominance of young married nurses aged 25 - 35 who worked night duty permanently either part time or full time to suit family

circumstances, to maintain their nursing expertise, or to re-enter the nursing profession. Many had pre-school, primary and secondary school age group children. Night work was identified as the best aspect of working at night and the least desirable aspects were the effect on the family and social life. The study identified the existence of a stable group of nurses who specifically chose night work. The study included recommendations for the selection, orientation and education of night staff.

Taffa (1983), reviewed the effects of circadian rhythms and shift work on nurses and developed a roster which rotated over sixteen weeks. Unfortunately these significant Australian studies undertaken as part of tertiary education, have not been published.

Adams, Folkhard & Young (1986, p. 185), confirmed that permanent night staff developed ways of living which off set physiological and psychological predispositions to night work. The greater the commitment to night work, the better the time management. Suitable orientation programmes were recommended for night staff.

Milne & Watkins (1986, p. 27) used longitudinal studies to demonstrate that nurses educated in to coping strategies perceived shift rotation to be only mildly stressful.

Cameron-Hill (1986, p. 7), recognised night nurses as a specialist group with specific needs and developed seminars for night nurses to assist with orientation and improve communication and understanding between day and night staff.

Vidacek, Kaliterna, Radosevic-Vidacek & Folkard (1986, p. 1583) demonstrated that on a weekly rotating shift system productivity and safety is impaired at night due to the early morning low dip in circadian rhythms and chronic fatigue developing after three night shifts.

Verhaegen et al (1987, p. 1301) required nurses to maintain sleep registers for one month and answer questionnaires. Full time night nurses displayed a tendency to be 'evening people', slept less, viewed night duty more favourably and organised their lives around their work hours. Rotating staff had more subjective health complaints and sleep problems.

Kemp's demonstration of the lack of a research base, resulted in the commissioning of the British National Health Services (1987) Management Consultancy Report on Nursing Services at Night. (N.H.S. Report 1987, introduction). This report identified severe deficiencies in the management education of nurses, work organisation, and discrimination against night nurses.

Eighteen hundred shift working nurses and their families were investigated by Bosch & Lange (1988, p. 773). Families were found to be continually adjusting to working hours. Loss of social contact was identified and family and social life was affected. Sleep deprivation and other circadian manifestations previously mentioned were identified as problems. Recommendations included the need to adjust work patterns to suit individuals and reduce physiological effects.

Fiedor & Keys (1987, p. 1116) identified some characteristics of nurses best suited to night duty. They had been assigned to night duty permanently for two years or more, and worked full time. The longer the nurse had worked night duty the better she managed her time, and used coping mechanisms such as thinking positively, eating and drinking regularly, exercised regularly and maintained social activities. These nurses identified the positive aspects of night duty, established sleep schedules, and used relaxation techniques. Elimination of noise, the restriction of caffeine and alcohol, and eating a high carbohydrate with milk at bedtime assisted in inducing sleep. A sense of security was ensured by locking doors, darkening the room and the wearing of ear plugs. Sleep disturbance, disrupted eating patterns, an imbalance of work and social activities, loss of self image (letting oneself go in terms of dress and

appearance) and the risk of driving accidents due to fatigue were cited as major causes of anxiety.

Alward (1988, p. 1336) undertook chronobiological research that has suggested that 'night owl' personalities are better suited to permanent night duty but not necessarily to shifts that rotated on to night duty. Alward recommended that further research was necessary to identify nurses most suited to night work and warned that motivation could override the chronotype factor.

Coffey et al (1988) measured job performance and job stress comparing night nurses with day and rotating shift workers. Findings were interpreted to examine social organisation of work within a hospital and the effects of shift work on biological rhythm synchronization. Rotating shift workers experienced the most job related stress, followed by night and day shift nurses.

In 1988, the author and two colleagues replicated Coughlin-West's study and surveyed the attitudes toward night duty of one hundred and thirty-seven nurses employed in two Perth psychiatric hospitals. Respondents were also asked to indicate optional shift patterns if required to work at night. The respondents, almost equally split male and female, were drawn from a population of nurses eligible to work at night. Five percent were permanent night staff.

The remainder were required by hospital policy, unless exempted by specific contract, to forward rotate on to night duty in a six week cycle. The nurses worked two weeks of morning shift, two weeks of afternoon shift and two weeks of night duty, four shifts on and two shifts off. Chronic fatigue and effects of night duty on the family were identified as major problems. Most commented that the two days off was insufficient to permit adaptation from nights to the morning shift. Some felt cold at night and requested heating. Concern at staffing levels and the lack of nursing, medical and paramedical resource staff at night was documented. Similar concerns were expressed during a public inquiry reported by O'Leary (1989, p. 7) which examined staff violence at one of the surveyed hospitals. Autonomy and freedom from day time 'bureaucracy' were identified as the best aspects of night duty. Further research was recommended as the instrument did not permit factor analysis to identify the reasons for the negative attitudes toward night duty.

Two books have been published, highlighting nurses working conditions, stress and the need for a review of work organisation. Sinclair (1988) describes the 'hazards of hospital work' in Australia and Rogers and Salvage (1988) 'nurses at risk' in Britain. These publications confirm the concerns of nurses that have been published in Nursing Journals over the past decade with regard to the quality of

patient care that they can offer while working unsuitable rosters, with staffing levels not being related to patient work load both at night and during the day.

APPENDIX B

2 John Street,
Shenton Park,
Western Australia, 6008.

The Director of Nursing,
Salutations

Dear Madam,

I am a student undertaking the Bachelor of Health Science Nursing (Honours) programme at W.A.C.A.E., Churchlands.

I write to ask for your co-operation in a research study related to 'attitudes of nurses toward night duty.' I wish to investigate if nurses' attitudes toward night duty are affected primarily by the roster system/work environment in which they work, or by circadian and chronobiological factors. The aim of the research is to identify nurses that are most likely to be suited to work at night and continues work undertaken in 1988, in Perth, by Gordon Peers, Geoff Brown and myself.

I seek your permission to permit any staff who are employed as part of the nursing complement to answer the questionnaire, a copy of which is enclosed. The questionnaire will be accompanied by an explanatory letter to ensure that procedures are followed so that anonymity is maintained and confidentiality assured. A full copy of the research proposal is included and I am sure that you will find details of recent overseas research to be of interest.

I will discuss the distribution and return of the questionnaires with you at the appropriate time, but anticipate that this could occur in August at your convenience and the results available in December.

It is hoped that the results of this research will be of value to staff involved with the selection, management and supervision of night nurses, and will indicate where nurses perceive they need assistance in coping with night work. A summary will be provided and I would be happy to come and present the results to any interested groups.

I look forward to your reply.

Yours faithfully,



Beth Brown.

APPENDIX C

Dear Nurse,

A recent West Australian pilot study which used this questionnaire suggested that nurses appreciated the opportunity to provide input with regard to night duty and duty rosters.

I am interested in examining the attitudes of nurses to night duty and would like to invite your participation by answering this questionnaire which will take approximately ten minutes of your time. For the purposes of this study, persons employed within the nursing division are invited to participate - this includes Registered Nurses, Enrolled Nurses, Student Nurses and Nursing Assistants, working in any capacity.

Please feel free to disregard any question you may not feel comfortable about answering. You are requested not to mark your form in any way that may identify you or your place of work, so anonymity is assured. There is no compulsion to participate, but if not interested, it would be appreciated if you would mark your form 'not participating' and place it in the collection envelope in your work area. The information obtained from the questionnaire will be treated confidentially and viewed only by myself and if necessary when analysing the data by my two academic supervisors at W.A.C.A.E.

The Director of Nursing at your hospital has given permission for the questionnaire to be distributed. On completion please place the forms in the collection envelope provided in your work area. This will be forwarded directly to me by a volunteer from your hospital.

I hope that this study will in some way lead to an increased understanding of the needs of nurses who work night duty.

A summary of the results will be made available to your administrators, and to any individual or group that may request it on completion of the study, approximately November, 1989. Should there be any queries I can be contacted on telephone 3821229 or a message left at 361-2414.

I really appreciate your interest, assistance and co-operation.

Yours sincerely,



Beth Brown.

This study is part of the requirements for the degree of Bachelor of Health Science Nursing with Honours.

APPENDIX DATTITUDES OF NURSES TO NIGHT DUTY - QUESTIONNAIRE

In the brackets opposite the question please write the number of the most appropriate answer. PLEASE NOTE THAT ONLY ONE ANSWER IS REQUIRED.

1. What is your gender? (1) Male (2) Female ()
7
2. Do you have dependents to support? (1) Yes (2) No ()
8
3. What is your employment category? (1) Registered Nurse ()
(2) Enrolled Nurse 9
(3) Student Nurse
(4) Nursing Assistant
4. What are your employment terms? (1) Full Time ()
(2) Part Time 10
(3) Casual
(4) Agency
(5) Other
5. Please identify the nursing role in which you are employed ()
(1) Management 11
(2) Education
(3) Clinical
(4) Research
(5) Combination () and ()
6. Please describe your nursing education ()
(1) Hospital based 12
(2) Tertiary
(3) Hospital and tertiary
7. In which country did you initially register as a nurse? ()
(1) Australia 13
(2) New Zealand
(3) Great Britain/Ireland
(4) U.S.A./Canada
(5) India/S.E. Asia
(6) South Africa
(7) Other
8. What is your age group? ()
(1) 17-19 14
(2) 20-29
(3) 30-39
(4) 40-49
(5) 50-59
(6) 60-65
9. What hours have you worked most in the last three months ()
(1) Permanent night duty 15
(2) Shift work including night when rostered to do so
(3) Permanent mornings, afternoons or days (Note excludes night duty)
(4) Permanent days plus on call at night
(5) A compulsory rotating roster pattern which includes night duty
e.g. mornings/nights; afternoons/nights; mornings, afternoons, nights
10. What is the longest period of time that you have ever worked night duty to the ()
nearest month. If a permanent night nurse - how long have you been working nights? 16 and 17
_____ years _____ months

11. Please identify the main reason you work night duty. If not currently working at night please indicate the reason that would make you change to working nights. () 18.
- (1) Financial incentive
 - (2) Only employment available to you
 - (3) You are or would have to be required by hospital policy to work at night.
 - (4) The only hours that suit your personal or family circumstances
 - (5) You prefer to work night duty over any other shift
 - (6) Working night duty is the only way you can attend tertiary lectures
12. Please identify one factor only from the following which you think influences your attitude toward night duty the most () 19
- (1) Hospital policies e.g. night duty is compulsory
 - (2) The roster pattern or system in your work area
 - (3) Work practices or work conditions at night
 - (4) The effects of night duty on your personal, family or social life
 - (5) Chronic fatigue, related to difficulty sleeping when working nights
 - (6) The general effects of disrupted 'body rhythms'
13. Does night duty affect your personal and/or social life () 20
- (1) Less than other shift hours
 - (2) About the same
 - (3) More than other shifts hours
 - (4) Don't know or not applicable
14. For you is night duty preferable to working during the day? () 21
- (1) Yes
 - (2) No
 - (3) No difference
15. For you is night duty () 22
- (1) Challenging
 - (2) Enjoyable
 - (3) Satisfying
 - (4) Frustrating
 - (5) Absolutely inteful
16. Who prepares your duty rosters? () 23
- (1) Day central administration staff
 - (2) Night administration staff
 - (3) The charge nurse or area manager
 - (4) Nurses themselves - i.e. self rostering
17. How would you describe your sleep pattern when working at night () 24
- (1) I sleep very soundly
 - (2) I sleep soundly
 - (3) I sleep adequately but my sleep is broken
 - (4) I sleep poorly and my sleep is inadequate
 - (5) I sleep very poorly and consequently suffer from chronic fatigue
18. Which of the following statements describes you personally? () 25
- (1) I am a 'morning lark' type person - I like to get up early, I am alert in the morning, but feel a need to retire to bed early
 - (2) I am a night owl, preferring to sleep late, I am more alert in the afternoon than in the morning. I work best in the evening and stay up late
 - (3) I don't know or don't think I fit either of these groups
19. Given a choice, if you had to work night duty, which of the following could you adopt to best? () 26
- (1) Permanent night duty
 - (2) Night shift work i.e. rostered to night as required
 - (3) A fixed rotating roster which included morning, afternoon and night shifts so you would know in advance what you were doing
 - (4) Night duty in a block of six weeks
 - (5) None of these, I would rather change my role than work night
 - (6) I would rather leave than work at night

20 What is the maximum period of time that you can or could work night duty without ()
feeling stressed? 27

- (1) Less than one week
- (2) One week
- (3) Two weeks
- (4) Three weeks
- (5) Four weeks
- (6) Six weeks
- (7) Eight weeks
- (8) Three months
- (9) Six months

In two recent surveys, nurses were asked to identify what they perceived to be the worst aspects of night duty. The following sentences relate to these situations. On the right there is a scale from 1 - 5 on which you are requested to indicate if you find the identified situation to be of concern or stressful to you. Please circle the number that is most appropriate.

Number 1: Indicates minimal concern or stress

Number 2: Indicates that some concern or stress is felt

Number 3: Indicates uncertainty as to if there is concern or stress

Number 4: Indicates moderate stress or concern

Number 5: Indicates the situation is of great concern or is very stressful.

- | | | |
|--|-----------|----|
| 21. Working nights can make you feel a second rate citizen as personal and educational needs are not met | 1 2 3 4 5 | 28 |
| 22. Being asked to move to an unfamiliar area where you don't know the patients | 1 2 3 4 5 | 29 |
| 23. Barriers appear to exist between day and night staff that can affect communication | 1 2 3 4 5 | 30 |
| 24. Staffing levels don't always relate to work load and help is not always available | 1 2 3 4 5 | 31 |
| 25. We have insufficient resource staff available at night | 1 2 3 4 5 | 32 |
| 26. I am unable to leave the ward area for meal breaks | 1 2 3 4 5 | 33 |
| 27. Meal breaks are taken but this often leaves only one nurse in the ward area. | 1 2 3 4 5 | 34 |
| 28. Meals, if provided for night staff are not the same as what are available to staff in the day time. | 1 2 3 4 5 | 35 |
| 29. Night nurses would like to attend inservice education lectures but are usually told relief staff are not available | 1 2 3 4 5 | 36 |
| 30. Drug administration at night can be frightening especially at 0500 when you are tired. | 1 2 3 4 5 | 37 |
| 31. Lectures and meetings are scheduled during sleep time with little consideration for night staff. | 1 2 3 4 5 | 38 |
| 32. It is just accepted that we can manage and make do with our staffing levels at night. | 1 2 3 4 5 | 39 |
| 33. Nurses preparing rosters seem to have forgotten what it is like to work at night. | 1 2 3 4 5 | 40 |

THANK YOU FOR YOUR TIME AND PARTICIPATION. SHOULD YOU WISH TO MAKE ANY COMMENTS ABOUT THIS QUESTIONNAIRE OR NIGHT DUTY, PLEASE FEEL FREE TO DO SO ON THE BACK.

APPENDIX E.

N Obs	Variable	N	Hospital A.		Mean	Std Dev
			Minimum	Maximum		
78	SECCIT	73	1.0000000	5.0000000	2.7808219	1.3968872
	UNFAMAR	73	1.0000000	5.0000000	2.9726027	1.4334554
	DNBAR	73	1.0000000	5.0000000	2.9452055	1.2898149
	STAFFLEV	73	1.0000000	5.0000000	3.5479452	1.4047647
	RESTAFF	72	1.0000000	5.0000000	3.3750000	1.4769354
	MEALBKD	68	1.0000000	5.0000000	2.6617647	1.5512180
	ONEPW	69	1.0000000	5.0000000	2.9710145	1.5336521
	NDMEALS	70	1.0000000	5.0000000	2.2285714	1.4858895
	RELIEFS	72	1.0000000	5.0000000	2.6111111	1.4969975
	DRUGS	70	1.0000000	5.0000000	2.8142857	1.4870734
	LECTME	71	1.0000000	5.0000000	3.0704225	1.5336599
	MANMAKDO	73	1.0000000	5.0000000	3.3698630	1.5138880
	NROST	68	1.0000000	5.0000000	2.5441176	1.4602578

N Obs	Variable	N	Hospital B.		Mean	Std Dev
			Minimum	Maximum		
70	SECCIT	68	1.0000000	5.0000000	2.1911765	1.2369601
	UNFAMAR	69	1.0000000	5.0000000	3.1594203	1.3571509
	DNBAR	69	1.0000000	5.0000000	2.0289855	1.2001350
	STAFFLEV	69	1.0000000	5.0000000	2.7391304	1.3789614
	RESTAFF	69	1.0000000	5.0000000	2.2318841	1.2735422
	MEALBKD	69	1.0000000	5.0000000	2.4782609	1.6052185
	ONEPW	60	1.0000000	5.0000000	2.4166667	1.5654280
	NDMEALS	67	1.0000000	5.0000000	2.3880597	1.6232704
	RELIEFS	64	1.0000000	5.0000000	2.6875000	1.5622024
	DRUGS	68	1.0000000	5.0000000	1.9558824	1.2979182
	LECTME	69	1.0000000	5.0000000	2.8985507	1.6101236
	MANMAKDO	69	1.0000000	5.0000000	2.7681159	1.4866556
	NROST	69	1.0000000	5.0000000	2.3478261	1.5129450

Obs	Variable	N	Hospital C.		Mean	Std Dev
			Minimum	Maximum		
44	SECCIT	41	1.0000000	5.0000000	2.3658537	1.4791230
	UNFAMAR	41	1.0000000	5.0000000	2.3658537	1.4621234
	DNBAR	42	1.0000000	5.0000000	2.5238095	1.2540295
	STAFFLEV	42	1.0000000	5.0000000	2.5952381	1.4492980
	RESTAFF	42	1.0000000	5.0000000	2.3809524	1.2287686
	MEALBKD	42	1.0000000	5.0000000	1.8095238	1.1736559
	ONEPW	42	1.0000000	5.0000000	2.5952381	1.3445377
	NDMEALS	39	1.0000000	5.0000000	2.1538462	1.3286016
	RELIEFS	41	1.0000000	5.0000000	2.2195122	1.3325201
	DRUGS	42	1.0000000	5.0000000	2.0476190	1.2484601
	LECTME	41	1.0000000	5.0000000	2.6097561	1.5309809
	MANMAKDO	41	1.0000000	5.0000000	2.5609756	1.2658748
	NROST	42	1.0000000	5.0000000	2.5476190	1.4176996

Hospital D.

N Obs	Variable	N	Minimum	Maximum	Mean	Std Dev
27	SECCIT	27	1.0000000	5.0000000	2.6296296	1.4973861
	UNFAMAR	27	1.0000000	5.0000000	3.3333333	1.3587324
	DNBAR	27	1.0000000	5.0000000	2.3703704	1.3908533
	STAFFLEV	27	1.0000000	5.0000000	2.8518519	1.4061323
	RESTAFF	27	1.0000000	5.0000000	2.8148148	1.4945294
	MEALBKD	27	1.0000000	5.0000000	3.0370370	1.7646416
	ONEPW	22	1.0000000	5.0000000	3.1818182	1.7630159
	NDMEALS	27	1.0000000	5.0000000	3.3703704	1.5725567
	RELIEFS	25	1.0000000	5.0000000	3.2800000	1.6206994
	DRUGS	27	1.0000000	5.0000000	2.3703704	1.3908533
	LECTME	27	1.0000000	5.0000000	3.5185185	1.4510042
	HANMAKDO	27	1.0000000	5.0000000	3.4074074	1.3939225
	NROST	27	1.0000000	5.0000000	3.2222222	1.6251233

Hospital E.

N Obs	Variable	N	Minimum	Maximum	Mean	Std Dev
18	SECCIT	18	1.0000000	5.0000000	2.7222222	1.4874200
	UNFAMAR	17	1.0000000	5.0000000	4.0000000	1.4142136
	DNBAR	18	1.0000000	5.0000000	2.5000000	1.4652846
	STAFFLEV	18	1.0000000	5.0000000	2.4444444	1.5038078
	RESTAFF	18	1.0000000	5.0000000	2.0000000	1.3719887
	MEALBKD	18	1.0000000	4.0000000	1.6111111	1.1447522
	ONEPW	18	1.0000000	5.0000000	1.8888889	1.4507154
	NDMEALS	18	1.0000000	5.0000000	1.7222222	1.2274103
	RELIEFS	18	1.0000000	5.0000000	2.7222222	1.5645167
	DRUGS	18	1.0000000	5.0000000	2.4444444	1.5424283
	LECTME	18	1.0000000	5.0000000	3.2777778	1.4874200
	HANMAKDO	18	1.0000000	5.0000000	2.4444444	1.5424283
	NROST	18	1.0000000	4.0000000	1.8888889	1.1826634

Hospital F.

N Obs	Variable	N	Minimum	Maximum	Mean	Std Dev
17	SECCIT	16	1.0000000	5.0000000	3.0000000	1.4605935
	UNFAMAR	15	1.0000000	5.0000000	2.7333333	1.3870146
	DNBAR	16	1.0000000	5.0000000	2.5625000	1.4591664
	STAFFLEV	15	1.0000000	5.0000000	2.3333333	1.3972763
	RESTAFF	16	1.0000000	4.0000000	1.8125000	0.8341663
	MEALBKD	15	1.0000000	5.0000000	1.8666667	1.4074631
	ONEPW	17	1.0000000	5.0000000	2.1176471	1.2187264
	NDMEALS	16	1.0000000	3.0000000	1.4375000	0.8139410
	RELIEFS	16	1.0000000	5.0000000	2.0625000	1.3400871
	DRUGS	15	1.0000000	4.0000000	1.8666667	0.9904304
	LECTME	17	1.0000000	5.0000000	2.6470588	1.3666188
	HANMAKDO	16	1.0000000	5.0000000	2.3750000	1.4083087
	NROST	15	1.0000000	5.0000000	2.3333333	1.2344268

APPENDIX F.

For some - the words 'night duty' appeared to create an explosive reaction. The following excerpts have been drawn from anecdotal comments spontaneously made on the back of the questionnaires by nurses from the six participating Western Australian hospitals.

Their publication is justified, as nurses were invited to comment if they chose to do so. Many pleaded for somebody to get the message across to nurse administrators about the issues that are causing concern and stress to nurses, and the effect on individuals of working at night.

Age 30 - "Night work affects all my activities, makes me feel tired, run down and unhealthy. It is boring, and antisocial."

Age 46 - working in a specialist domiciliary unit. "Night shift should be done by rotation. Permanent night shift is demoralising and can lead to a loss of expertise and competence."

Age 36 - Works night permanently. "Day staff need to understand the stresses of working at night and change their attitudes. We are fellow health workers with equal intellectual abilities. As members of the 'whole team' we deserve the courtesy of professional recognition. We are not just baby sitters."

Aged 29 - "I am extremely concerned at the lack of resource staff available at night, both medical and nursing in an acute care hospital. Help is not always available for extended periods, and often our staff are taken to work in another ward area. We don't get them back. Sometimes if we complain loud enough, help is sent from another area. A dangerous practice as they don't know our patients."

Aged 38 - "I can say nothing good about night duty. Night duty totally disrupts my life and that of my family. My physiological balance is disrupted. I become chronically fatigued to the point that I just cannot cope safely at work or at home."

Aged 32 - "No staff should be appointed to permanent night duty. They become boring people who loose touch with other nursing aspects. They think they are special. Night duty does give you extra time to read patients charts and do book work but it does cause sleep deprivation and it diminishes my sex life."

Age 38 - "Working night duty leaves more time in real terms to do shopping etc. There is less traffic to and from work, and there are less hassles from administrative staff and the 'bureaucracy.' However, I have great difficulty sleeping. I feel concern for the social isolation of night staff and for the period of time patients have to wait for medical attention at night. There is a real need for other health

professionals to be available at night - especially psychologists."

Age 21 - "Working at night permits me to attend lectures and to further my education. As I have young children I can spend more time with them during the day. However I am away from my partner for long periods. It puts a strain on my marriage and prevents social activities. Working a rotating roster, I just can't adapt to the two weeks nights - it is very unsettling."

Age 40 - 50:- "I turn into a total zombie for my two week period of night. I am lucky if I can sleep four hours out of twenty four. I have just recovered by the end of my two weeks morning and two weeks afternoon and then its back to this ghastly night duty. Perhaps I could adapt better if nights were in a six week block period."

Age 34 - "I absolutely dread being sent to another ward area at night. I have never seen the patients. Some are aggressive and need special understanding. This situation is frightening and dangerous for staff and patients."

Age 56 - "I suffer from 'jet lag' when I work at night. As my age has increased, my ability to work at night has decreased. I seem to catch any bug that is going. I am chronically fatigued and turn into a monster.

Age 22 - "I cope reasonably with night duty. I accept it as part of my job but I find that for some reason I feel cold all the time. We need heating at night."

Age 36 - "I hope your survey will bring our administrators to their senses. This rotating roster is impossible to cope with. We work two weeks morning, two weeks afternoon and two weeks night - four shifts on and two shifts off. I accept the hospital has to be staffed and this way we take turns, but most of us just don't cope and this could be really dangerous for patients and us in medico-legal terms. Please suggest three weeks morning, three weeks afternoon and then six weeks night in a block. Please tell them that we freeze to death in the early hours of the morning. Why don't we receive extra pay for working these 'unsociable' hours?"

Age 48 - "When working nights I become depressed. I can think of nothing but how much sleep I did or didn't get. Sleep becomes the focus of my life. I become an ogre. Sometimes I arrive home in the morning and wonder just how I got there - don't remember red lights or anything. Driving home is a nightmare and one day I might have an accident and injure somebody else."

Age 34 - "I hate night. I have become an expert at swapping shifts to avoid night duty. I'm pleased some staff are trying to obtain a tertiary education - they hone in on me like bees to honey and I haven't worked nights for months."

Age 39 - "Few will agree with me but there is a solution to this rotating roster. We could have night duty in 36 day blocks - work 24 nights straight and then have a 12 day holiday. It could be fitted in to the 4x2 roster."

Age 40 - 49:- "I think that for many nurses in the psychiatric field, the odd week of night duty is a useful anti-burnout device and can increase appreciation of the other shifts. Many nurses are noticeably more enthusiastic re intensive patient contact after a short spell of night duty."

Aged 28 - "At this hospital we have permanent night staff who choose to work night. It is a great relief to know that I won't have to work night shift and I hope your research won't change this policy. Nurses have needs too. Nurses who don't get adequate sleep when working night are a danger to themselves and their patients."

Age 34 - "I worked night duty permanently for ten years. It was the only way I could support my family as a solo parent. I can't say I enjoyed the experience. I was always tired. There is more autonomy and group feeling on night. My recent return to day shifts has made me realise just what we cope with on night with limited staff. It takes so many more people to do the same job during the day. Night staff are discriminated against in many ways:- lack of meals compared with day staff. Inability to attend study days - we asked

but there was no staff to replace us. We just gave up asking. Night staff play an important role in the 'nursing team' yet they seem out of sight and out of mind. Where are the Nurse Educators and Clinical Nurse Specialists and Quality Assurance personnel that work during the day to assist staff who also have medical and paramedical personnel available to them? Can we really offer the same quality care? Night nurses' opinions are not sought with regard to ward policies. Meetings are arranged at times that make it impossible to get adequate sleep, and the people doing rosters have forgotten what it was like to work at night. Your survey will help nurses understand.

Age 24 - Night duty is great. I love the autonomy and opportunity to use all my skills. It's a challenge.

Age 40 - 49: - "For me night duty is absolutely the pits. I love nursing but would give it up rather than have to work at night. I am one of those people who's body clock simply cannot adjust to night duty. You have chosen an excellent topic. Please bring us feedback.

Age 30 - 39:- "I have never had to work at night. Lucky me. Are student nurses told about the effects of night duty on body rhythms?

Age 50 - 59:- " Alas - frequently nursing administrative staff who arrange nursing rosters forget about the individuals who have to work them. This causes absolute frustration which is not conducive to

proficient nursing. Nurses who are health professionals must produce and work some of the worst, unhealthy roster patterns ever. It's time some commonsense prevailed. These rosters are occupational health hazards."

Age 32 - "I work night duty on a casual basis and I enjoy night duty. Despite the fact that I have indicated to the hospital that I can only work Mondays and Wednesdays and could guarantee to turn up, I keep getting told I am needed on other nights. Last week I was told that if I was not prepared to do so I should resign. Why are nursing administrators so inflexible?"

Age 40 - 49:- "I have been told that if I don't work at night I could lose my job. I sleep so badly on night shift that I have had to resort to taking sedatives. Not good at all. Why can't they understand that some people just don't get enough sleep to work at night safely."

Age 40 - 49:- "I love night duty but it does wreck my family, social and sex life."

Age 20 - 29:- "Night duty should remain optional. The welfare of the nursing staff is equally important as that of the patients."

Age 50 - 59:- "There are many resources that nurses can make use of at night. I don't think the answers to your questionnaire will give a true picture. Nurses

working together as a body can pool many expert resources. Nurses work in a profession where people are sick twenty four hours a day. We must not loose sight of this fact.

Age 20 - 29:- Lectures occur in the morning and afternoon. This semester I took only two units part time and this means I attend twelve hours per week. The timetable I follow means I must go to uni no less than three days a week to cram these hours - 8 am Monday, 5 pm Tuesday 12 noon on thursday. When can I sleep?"

Age 28 - "I feel concerned about the number of nurses who are requesting to work at night so they can go to university. Permanent night staff find they have to accept the 'left over nights' and some of the studying nurses are so tired that they are dangerous. Us young ones are covering up for them all the time and carrying their work load."

Age 45 - I work night permanently. I am required to improve my qualifications as part of the Nurses Career Structure. The tax department tells me that if I was going to lectures from work I could claim travelling expenses for that mileage and back to work.

Because I work at night - leave work, go home, and sleep before attending lectures I cannot claim these study related travelling expenses. Its the same for my attendance at meetings which occur in my sleep time.

Age 44 - I think, your research is great - just what is

needed. When I was invited to train as a nurse in 1963, the Matron told me I would work six days per week, and would be required to work at least two periods of night duty in six week blocks per year. I was told that nurses working at night were special and for that reason would be required to sleep in the night staff block so they wouldn't get disturbed and must not get up before 3 pm so as not to disturb others. Meals were specially cooked for us in the kitchen at night and we were given extra fruit. I don't remember anybody hating nights like they do now and I don't recall any absenteeism. Considering that the hospital was staffed at night by just student nurses, and a Night Supervisor it is amazing what we coped with in hindsight. The power we felt when handing over to other students in the morning was something. It is different today - nurses don't have to live in and they are trying to cope with families and study as well. I can understand why some hate night. Night nurses' needs are just not really considered. My experience as a student created a positive attitude toward night duty. I must admit though that my recent return to nights has been traumatic - my body doesn't cope at all well and my sleep is so disrupted."

Age 30 - 39:- "Night duty is the absolute 'pits,' but it is preferable when having to go to lectures during the day; or when having visitors."

Age 30 - 39:- " For me the overall negative effects of nights is the considerable time that it takes my body to adjust and for my body to get back to a state of wellness. I experience stomach and bowel disturbances, fatigue and loss of concentration for at least three days after working a fortnight of night duty."

Age 20 - 29:- "There appears to be very little consideration given to the fact that nurses are expected to be able to adapt to a change from sleeping during the day (usually with the aid of sleeping tablets) and staying awake all night; to having to suddenly reverse this cycle to sleeping night time and staying awake during the day within a matter of days. The two day break coming off nights is not enough time to adapt. Yet all the time nursing staff are trying to conduct themselves at the highest level of performance."

Age 28:- "Never, never, never will I volunteer for night duty. I would rather leave."

Age 32 - "Why do nurses not receive suitable penal rates for working at night? During the week they are no different for working in the afternoons. No wonder everybody wants to work friday, and saturday when the pay is better."

Age 26 - " I feel concerned that meals are not available for night staff and often staff are not available to relieve us for meal breaks at night. It

is not right to be seen eating on the wards by patients or their relatives. In the early hours of the morning because of lack of food I am dizzy and forgetful.

I am terrified I could give out the wrong drugs.

I suffer from stomach upsets too. Sometimes nurses are so desperate for a break that only one person can be left on the ward - this person may be just an enrolled nurse. One person for thirty patients. What if there was a fire or a cardiac arrest? Somebody has to do something about this sort of situation - it happens more often than you think. It is not that nurses don't care, there is just nobody to relieve for meals or to cover for staff who don't turn up for work. Often we are left short as the Night Manager has no choice but to move staff from our ward to other areas. It's no wonder that a lot of nurses hate night duty - especially if they have an understanding of legal issues. Will patients have to die before more funds are made available for nursing staff at night?

Age 23 - "When I applied for a job I was told the only position available was to work night. I was promised that as soon as a day position was available I could transfer to day shifts. Every time I ask I get told there is nothing available and I am needed at night. Other staff are getting appointed to day positions. What about me? I am just going to have to leave.

Age 24 - "I think Area Managers should work one night shift per month. They would be more in touch with

the night staff and we could communicate better."

Age 21:- "Why are nurse educators not available at night? The poor Night Manager is expected to be a manager and a Clinical Nurse Specialist too. She tries but she can't be an educator as well. We need an orientation programme to help us adapt to night work. My body behaves so badly - I thought I was sick. It turns out other nurses are affected the same way - its our circadian rhythms!"

Age 48:- I have been a night nurse for more than ten years. The hours suit my family and somebody is always at home with the children. Originally I worked part time and it helped me to return to the work force. Night duty is becoming more and more stressful for nurses. I have tried and tried to get across to Hospital administrators that night nurses' needs are not met. We have had to fight for suitable parking, meals are mediocre and the security angle of unwelcome individuals on the premises is a worry. It would help if night management staff could be involved in the preparation of the rosters - they know the capabilities of their regular staff, but they haven't the time to do this and be a Clinical Nurse Specialist as well. Night nurses need education too and meal breaks. Questions must be asked about night staffing levels and the quality of nursing services at night."

These comments cover a variety of issues and concerns which highlight the stresses of shift work and some of the occupational hazards of working at night.

Gavin Brown, (1988, p. 13) a member of the Coronary Care Unit staff at Woden Valley Hospital, ACT really sums up the night experience in his poem.

NIGHTS

WHEN THE THOUGHTS BEGIN TO WANDER,
AND THE HEAD BEGINS TO SPIN
WHEN ALL YOU WANT TO DO IS SLEEP,
BUT DO NOT DARE GIVE IN.
WHEN YOU SWEAR YOU SAW AN APPARITION,
UPON THE DARKENED WALL,
AND YOU STRUGGLE TO CONVINCE YOURSELF,
THERE WAS NOTHING THERE AT ALL.
WHEN YOU FEEL THAT YOU'RE GOING BONKERS,
GONE COMPLETELY OFF YOUR BRAIN
AND YOU HAVE TO READ WHAT FREUD SAYS
TO CHECK YOU'RE NOT INSANE.
IT SURELY HELPS TO KNOW YOU'RE HUMAN,
AND THAT EVERYTHING'S ALRIGHT,
CAUSE YOU'RE PART OF THAT EXCLUSIVE GROUP
THE NURSES OF THE NIGHT.